

Regional Plan: Water for Otago

This version of the Regional Plan: Water for Otago shows amendments proposed by Plan Changes 7 and 8.

The proposed amendments are shown as follows:

- additions underlined
- deletions ~~struck-out~~

**Otago Regional Council
Updated to 16 May 2020**

ISBN 978-0-908324-61-3

Please note that there is an accompanying volume of maps (ISBN 978-0-908324-08-8) which identifies features and areas referred to in this Plan.

All grid references used in this Plan are based on the NZMS 260 Series.

The Waitaki Catchment Water Allocation Regional Plan added new definitions to the Glossary of this Plan. The new definitions only apply where the terms are underlined in this Plan.

This is a true and correct copy of the Regional Plan: Water for Otago which was approved by the resolution of the Otago Regional Council on Wednesday, 22 April 2020.

This copy of the Regional Plan: Water is deemed to be operative on Saturday, 16 May 2020.

The Common Seal of the Otago Regional Council was hereto affixed pursuant to the resolution of the Council passed on Wednesday 6 May 2020 in the presence of:



Marian L Hobbs

Marian Hobbs
Chairperson

Sarah Gardner

Sarah Gardner
Chief Executive

Chronicle of Key Events

Key event	Date notified	Date decisions released	Date operative
Regional Plan: Water	28 February 1998	7 July 2000	1 January 2004
Variation No. 1 to the Regional Plan: Water	3 October 1998	7 July 2000	1 January 2004
Waitaki Catchment Water Allocation Regional Plan	19 February 2005	30 September 2005	3 July 2006
Plan Change 1A to the Regional Plan: Water	17 August 2005	1 April 2006	1 August 2006
Plan Change 1B (Minimum Flows) to the Regional Plan: Water	20 December 2008	31 October 2009	1 March 2010
Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) to the Regional Plan: Water	26 June 2010	8 December 2010	1 May 2011
Amendment 1 (NPS Freshwater Management) to the Regional Plan: Water	24 June 2011	24 June 2011	1 July 2011
Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water	20 December 2008	10 April 2010	1 March 2012
Plan Change 4A (Groundwater and North Otago Volcanic Aquifer) to the Regional Plan: Water	18 September 2010	24 September 2011	1 March 2012
Plan Change 2 (Regionally Significant Wetlands) to the Regional Plan: Water	2 July 2011	12 May 2012	1 October 2013
Plan Change 6A (Water Quality) to the Regional Plan: Water	31 March 2012	20 April 2013	1 May 2014
Plan Change 3B (Pomahaka catchment minimum flow) to the Regional Plan: Water	16 August 2014	14 February 2015	1 June 2015
Plan Change 4B (Groundwater allocation) to the Regional Plan: Water	17 May 2014	13 December 2014	1 September 2015
Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water	16 August 2014	13 December 2014	1 September 2015
Plan Change 3C (Waiwera catchment minimum flow) to the Regional Plan: Water	13 December 2014	8 August 2015	1 March 2016

Amendment 2 (NES Plantation Forestry) to the Regional Plan: Water	30 June 2018	30 June 2018	1 July 2018
Plan Change 6AA to the Regional Plan: Water	5 October 2019	8 February 2020	16 May 2020

How to Use the Regional Plan: Water

This Regional Plan: Water considers the use, development and protection of the fresh water resources of the Otago region, the beds and margins of water bodies, and the issues associated with that use, development and protection. This Plan provides objectives, policies, rules and other methods of implementation to address those issues. The rules of the Plan determine the status of any particular activity and determine whether a resource consent will be required before that activity can be carried out.

Subject to Sections 86A to 86G of the Resource Management Act, a resource consent is required for any activity which this Regional Plan: Water specifies as being:

- (a) A controlled activity;
- (b) A restricted discretionary activity;
- (c) A discretionary activity; or
- (d) A non-complying activity.

In some cases, the Plan specifies certain activities as being prohibited activities. These are activities which cannot occur and are activities for which no resource consent will be issued.

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Regional Plan: Water for Otago Maps

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Section C Aquifers, Groundwater Zones and Groundwater Protection Zones
Section D Aquifer Take Restriction Areas takes
Section E Areas with Water Bodies Sensitive to Suction Dredge Mining also showing Subregional Boundaries
Section F Regionally Significant Wetlands
Section G <i>[Repealed – 1 October 2013]</i>
Section H Nitrogen Sensitive Zones
Section J Schedule 16 Discharge Threshold Areas

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Introduction



1.1 Plan purpose

The Otago Regional Council has prepared this Regional Plan: Water to meet its responsibilities under the Resource Management Act 1991. The purpose of this Plan is to provide a framework for the integrated and sustainable management of Otago's water resources. These water resources include the region's lakes, rivers, groundwater and wetlands.

Many activities involving water or water bodies can only occur if they are expressly allowed by a rule in a regional plan, or by a resource consent, including:

- Certain activities in, on, under or over the beds of lakes and rivers (Section 13 of the Resource Management Act).
- The taking, use, damming or diversion of water (Section 14 of the Resource Management Act).
- The discharge of water into water (Section 15 of the Resource Management Act).
- The discharge of contaminants into water or onto or into land in circumstances which may result in that contaminant entering water (Section 15 of the Resource Management Act).

Land use activities are generally allowed unless a rule in a regional plan, or a district plan requires otherwise (Section 9 of the Resource Management Act).

The preparation of a Regional Plan: Water is optional under the Resource Management Act. This Plan contains provisions to avoid the need for resource consents for activities which have no more than minor adverse effects on the environment. For other activities, the rules provide a clear direction for resource users and the community.

The Plan also contains other methods for promoting the sustainable and integrated management of Otago's water resources.

1.2 Area covered by this Plan

This Plan covers all of the fresh water resources in the Otago Region (Figure 1). These include the region's lakes, rivers, groundwater and wetlands. This Plan does not cover coastal waters except where activities on land may affect such waters. Activities within the coastal marine area are covered by the Regional Plan: Coast (also shown in Figure 1).

This Plan applies across Otago encompassing the five territorial local authority districts:

- Waitaki (only that part in the Otago Region. Part of Waitaki District lies in the Canterbury Region and that part of the District is not covered by this Plan);
- Dunedin City;
- Clutha;
- Central Otago; and
- Queenstown Lakes.



Figure 1: Map of Otago

1.3 Plan structure

This Plan is divided into a number of parts:

Chapters 1 to 4

These chapters introduce the Plan, describe the legislative framework relating to water, provide a brief overview of Otago’s water resources and outline the perspective of, and issues of concern to, Kai Tahu, Otago’s manawhenua.

Chapters 5 to 10

These chapters identify the water management issues in Otago, and contain the objectives and policies with respect to these issues. These provisions will guide the Otago Regional Council, and other consent authorities, when considering resource consent applications. The

chapters also detail the environmental results anticipated from the implementation of this Plan. Each chapter addresses a particular aspect of Otago's water resource:

- Chapter 5: Natural and Human Use Values of Lakes and Rivers.
- Chapter 6: Water Quantity.
- Chapter 7: Water Quality.
- Chapter 8: Beds and Margins of Lakes and Rivers.
- Chapter 9: Groundwater.
- Chapter 10: Wetlands.

Chapters 11 to 14

These chapters contain the rules applying to the use of water and water bodies. When considering undertaking an activity which may affect water or water bodies, these are the rules that must be followed.

Chapter 15

This chapter identifies the methods other than rules that the Otago Regional Council intends to use to assist in the achievement of this Plan's objectives.

Chapters 16 to 19

These chapters identify the main administrative requirements for the use of Otago's water resources, and specify the information required with any resource consent application, the circumstances where a financial contribution may be required, how issues which cross jurisdictional boundaries will be dealt with, and the processes for reviewing and monitoring the Plan.

Schedules - Chapter 20

The schedules are an important supplement to the other chapters, providing details of the values and specific management requirements of particular water resources.

Glossary and Appendices

These provide additional explanations including a glossary of key terms used in this Plan.

Maps

This Plan contains maps (in a separate volume) to be used in conjunction with the provisions of the Plan.

1.4 Process of Plan preparation

A number of legal instruments, which were operative in Otago on 1 October 1991 (when the Resource Management Act came into force), formed rules in the Transitional Regional Plan, constituted by Section 368 of the Resource Management Act. Some of these rules related to water and water bodies, and comprised notices, authorisations, bylaws, determinations and resolutions. This Regional Plan: Water was prepared to partly supersede the Transitional Regional Plan, thus the transitional rules which related to water were deleted when this Plan became operative. The rules deleted, and any replacement provisions, are listed in Schedule 13.

In developing this Regional Plan: Water, the Otago Regional Council consulted with a variety of individuals, groups and agencies.

Following preliminary consultation, a Consultative Draft of the Regional Plan: Water, was released in September 1996. Over 70 meetings were held throughout Otago to introduce and explain the Consultative Draft, and it attracted written comments from 110 individuals and groups representing a wide range of interests. This feedback was used to further refine the provisions of the Plan. Background reports were compiled which provided additional information about aspects of Otago's water resources. These reports remain available from the Otago Regional Council:

- Background Report 1: Water Quantity
- Background Report 2: Water Quality
- Background Report 3: Groundwater
- Background Report 4: Significant Wetlands
- Background Report 5: Resource Description
- Background Report 6: Kakanui Catchment Water Resource Investigations

The Proposed Regional Plan: Water for Otago was notified on 28 February 1998, in accordance with the requirements of the First Schedule of the Resource Management Act 1991. Submissions were received from 280 individuals and groups, followed by 64 further submissions. Many submitters spoke at the 18 public hearings held in Dunedin, Alexandra, Oamaru and Balclutha between 17 August 1998 and 9 November 1998.

Proposed Variation No.1 was notified on 3 October 1998, to manage the construction, reconstruction or modification of defences against water built for the purpose of flood mitigation. Ten submissions and five further submissions were received.

Following the hearings and the consideration of evidence, decisions on the submissions received on both the Proposed Regional Plan: Water and the Proposed Variation No.1 were released on 7 July 2000. Several organisations and individuals made references (appeals) to the Environment Court regarding the decisions. The 171 reference points were resolved by negotiated agreements and Court decisions in the period up to 4 July 2003. These changes were incorporated into the Plan and the Plan made operative.

Proposed Plan Change 1A was notified on 17 August 2005 to make miscellaneous amendments consequential to recent changes to the Resource Management Act and other minor changes. Four submissions and one further submission were received. Following the hearing, decisions on the submissions received were released on 1 April 2006. Plan Change 1A was made operative on 1 August 2006.

On 3 July 2006, the Waitaki Catchment Water Allocation Regional Plan became operative and added new provisions to this Plan.

Proposed Plan Change 1B (Minimum Flows) was notified on 20 December 2008 to set minimum flows and primary allocation limits for the Luggate, Trotters and Waianakarua catchments in Schedule 2A, and to include Schedule 2D outlining matters for consideration when setting minimum flows and primary allocation limits. A total of 71 submissions and six further submissions were received. Following the hearing, decisions on the submissions received were released on 31 October 2009. Plan Change 1B (Minimum Flows) was made operative on 1 March 2010.

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Proposed Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) was notified on 26 June 2010 to introduce an additional minimum flow monitoring site at Tiroiti. A total of six submissions and two further submissions were received. Following the hearing, decisions on the submissions received were released on 8 December 2010. Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) was made operative on 1 May 2011.

Amendment 1 to the Regional Plan: Water included a policy on water quality, as directed by the National Policy Statement for Freshwater Management 2011. It was made operative on 1 July 2011. This was superseded by Plan Change 6A (Water Quality).

Proposed Plan Change 1C (Water Allocation and Use) was notified on 20 December 2008 to improve the overall effectiveness with which limited water resources are used, enabling the community to go forward and benefit from future opportunities to use water. Fifty-nine submissions and fifteen further submissions were received. Following the hearing, decisions on the submissions received were released on 10 April 2010. Plan Change 1C (Water Allocation and Use) was made operative on 1 March 2012.

Proposed Plan Change 4A (Groundwater and North Otago Volcanic Aquifer) builds on the groundwater management system of taking water within a maximum allocation limit, established under Proposed Plan Change 1C (Water Allocation and Use), with focus on the North Otago Volcanic Aquifer. It was notified on Saturday 18 September 2010, and a total of nine submissions and two further submissions were received. Following the hearing, decisions on submissions received were released on 24 September 2011. Plan Change 4A (Groundwater and North Otago Volcanic Aquifer) was made operative on 1 March 2012.

Proposed Plan Change 2 (Regionally Significant Wetlands) was notified on Saturday 2 July 2011. It identified additional Regionally Significant Wetlands, strengthened protection for Regionally Significant Wetlands, and made those provisions easier to read and understand. A total of forty-nine submissions and nine further submissions were received. Following the hearing, decisions on submissions received were released on 2 May 2012. Plan Change 2 was made operative on 1 October 2013.

Proposed Plan Change 6A (Water Quality) addresses the effects of land use practices on water quality through new discharge rules. It was notified on Saturday 31 March 2012 and a total of 334 submissions and 77 further submissions were received. Following the hearing, decisions on submissions received were released on 20 April 2013. Plan Change 6A (Water Quality) was made operative on 1 May 2014.

Proposed Plan Change 3B (Pomahaka catchment minimum flow) was notified on 16 August 2014, to introduce a minimum flow and allocation regime with monitoring site and a map of the Pomahaka Alluvial Ribbon Aquifer for the Pomahaka catchment. A total of 17 submissions and two further submissions were received. Following the hearing, decisions on submissions received were released on 14 February 2015. Plan Change 3B was made operative on 1 June 2015.

Proposed Plan Change 4B (Groundwater allocation) clarifies groundwater allocation provisions. It was notified on 17 May 2014 and a total of 16 submissions and 8 further submissions were received. Following the hearing, decisions on submissions received were released on 13 December 2014. Plan Change 4B was made operative on 1 September 2015.

Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) sets a maximum allocation limit for the Cromwell Terrace Aquifer. It was notified on Saturday 16 August 2014, and a total of 8 submissions and 3 further submissions were received. Following the hearing, decisions on submissions received were released on 13 December 2014. Plan Change 4C was made operative on 1 September 2015.

Proposed Plan Change 3C (Waiwera catchment minimum flow) was notified on 13 December 2014 to introduce a minimum flow and allocation regime with monitoring site for the Waiwera catchment. A total of six submissions and two further submissions were received. Following the hearing, decisions on submissions received were released on 8 August 2015. Plan Change 3C was made operative on 1 March 2016.

Amendment 2 was made to clarify where more stringent rules in this plan apply to forestry activities instead of the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017, which came into effect on 1 May 2018. The amendment was made operative on 1 July 2018.

Proposed Plan Change 6AA was notified on 5 October 2019 to amend the date by which various water quality thresholds are to be met in receiving water for permitted non-point source discharges. A total of 20 submissions and three further submissions were received. Following the hearing, decisions on submissions received were released on 8 February 2020. Plan Change 6AA was made operative on 16 May 2020.

1.4.1 Satisfying Section 32 of the Act

Section 32 of the Resource Management Act 1991 requires councils, before adopting any objective, policy, rule, or other method, to have regard to:

- Alternatives that may be available; and
- The reasons for and against options, including their costs and benefits.

The Otago Regional Council considered these matters in preparing this Plan and is satisfied that the selected objectives, policies and methods are necessary in achieving the purpose of the Resource Management Act 1991 and are the most appropriate means having regard to their efficiency and effectiveness. The community feedback received on the Consultative Draft Regional Plan: Water, followed by the submissions, further submissions and appeals on decisions made with respect to the Proposed Regional Plan: Water, assisted the Council to make this evaluation.

1.5 Integrated management

This Regional Plan: Water promotes the sustainable management of Otago's water resources. To achieve this, the Plan takes an holistic, integrated approach to resource management, which includes:

- Integration of management responses across resource management agencies.
- Integration toward shared environmental outcomes.
- Integration of policies, action and decision-making needs to be coordinated across regional boundaries.
- Integration of management responses across resource systems.

I N T R O D U C T I O N

- Integration of actions across a range of time scales.
- Integration of decision-making with community participation.
- Integration of methods to be used to implement policies.
- Integration across individual decisions.

Although this Plan comprises discrete chapters, these should not be viewed in isolation, as the Plan needs to be read as a whole. The Plan should also be read in conjunction with the Resource Management Act, the Regional Policy Statement for Otago, other relevant Otago regional plans and any relevant district plan. Chapter 2 provides more detail on relationships among resource management documents.

To assist the achievement of an holistic approach to resource management, and to assist users to read the Plan as a whole, this Plan uses a system of cross-referencing to link issues, objectives, policies, rules and methods. Within this system:

- Each issue refers to the relevant objectives and policies in its chapter;
- Each objective refers to the relevant policies in its chapter;
- Each policy refers to the relevant rules in Chapters 12 to 14, and/or the other methods in Chapter 15; and
- Where necessary, particular provisions refer to another chapter if it contains provisions which are significantly relevant.

2

Legislative and Policy Framework



2.1 Introduction

The principal statute under which the natural and physical resources of Otago are managed is the Resource Management Act 1991 (the Act), and it is under this Act that this Plan has been developed. The Act also provides for specific policy statements (i.e. regional policy statements) which have an impact on the management of water and water bodies. Some activities are also subject to the specific requirements of other statutes. Many of New Zealand’s statutes reflect international agreements and obligations.

This chapter provides a brief overview of the statutes and other arrangements relevant to the management of water in Otago, and their relationship to this Regional Plan: Water.

2.2 Relationship to other resource management documents

This Regional Plan: Water fits within a framework of international, national, regional and local resource plans and other documents as shown in the following figure:

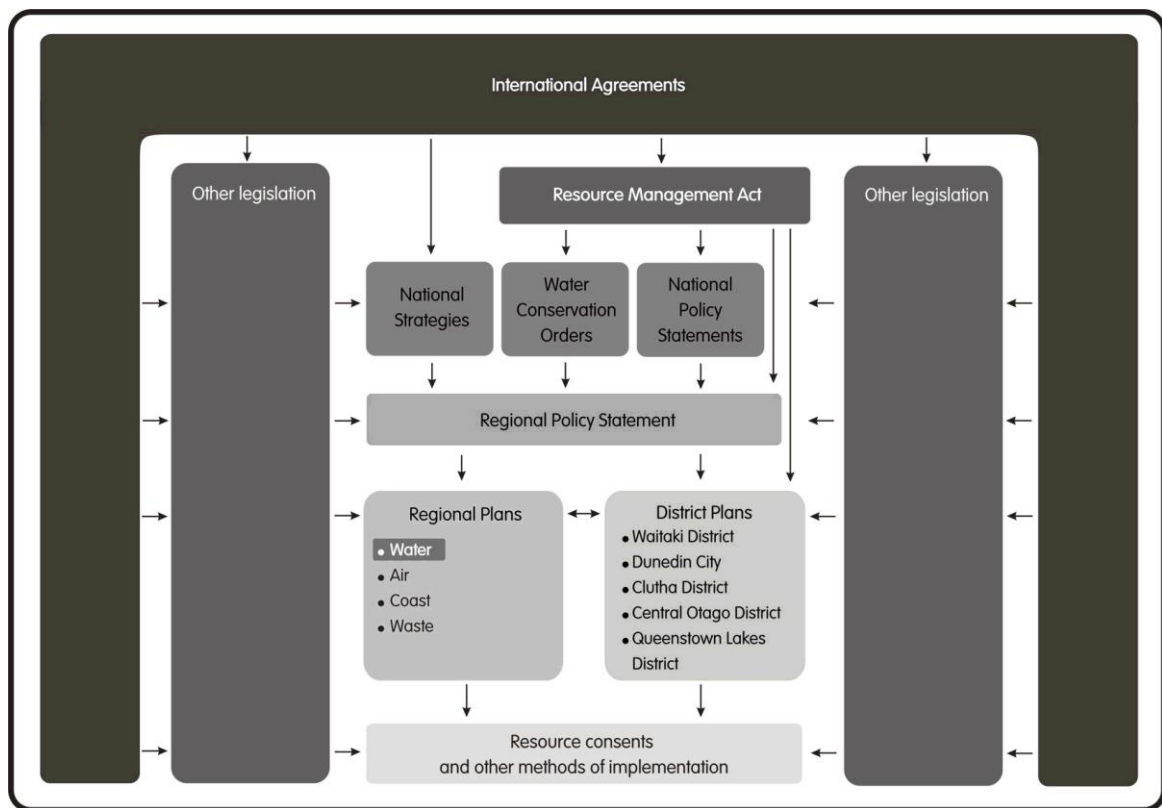


Figure 2: Overview of the resource management framework

Note: For clarity, this diagram presents the resource management framework in a simplified form with key links illustrated.

2.2.1 International agreements and obligations

While the Resource Management Act reflects various international agreements on sustainability, New Zealand is party to several international obligations which have direct implications for the management of water resources, including:

- The Ramsar Agreement¹, which is an inter-governmental treaty for international cooperation for the conservation and wise use of wetland ecosystems.
- The Convention on Biological Diversity², ratified by New Zealand, which has objectives including the conservation of biodiversity.
- The Venice Charter 1966, (ICOMOS)³, also ratified by the New Zealand Government, which is an international charter for the conservation and restoration of monuments and sites of heritage value.

National guidelines or strategies may be issued from time to time by the Government to help meet international obligations. An example is The New Zealand Biodiversity Strategy (see 2.2.4) developed to meet commitments of the international Convention on Biological Diversity.

Principles from these agreements have been taken into account in the preparation of this Regional Plan: Water, to the extent that they are reflected in New Zealand legislation.

2.2.2 Resource Management Act

The Resource Management Act 1991 provides the framework for the management of natural and physical resources in New Zealand. Part II of the Act contains a number of specific provisions which must be taken into account in considering the use, development or protection of Otago's water resources and water bodies.

2.2.2.1 Purpose

Section 5 of the Resource Management Act 1991 states:

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, "sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well being and for their health and safety while -*
 - (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
 - (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

¹ Davis TJ (1994) *The Ramsar Convention Manual – A Guide to the Convention on Wetlands of International Importance especially as Waterfowl Habitat*. Ramsar Convention Bureau, Paris.

² United Nations (1992) *Convention on Biological Diversity, 17 June 1992*. United Nations, New York. Reprinted in *Environmental Policy and Law* 22 (4): 251-258.

³ International Council on Monuments and Sites (1966) *International Charter for the Conservation and Restoration of Monuments and Sites*.

- (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

This Plan has been prepared to enable the Otago Regional Council to promote the sustainable management of the natural and physical resources of Otago, through the management of water and water bodies, and activities that could affect them.

2.2.2.2 Matters of national importance

Section 6 of the Resource Management Act 1991 identifies matters of national importance that the Otago Regional Council must recognise and provide for in managing the use, development, and protection of natural and physical resources:

- (a) *The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) *The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) *The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) *The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) *The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*
- (f) *The protection of historic heritage from inappropriate subdivision, use, and development:*
- (g) *The protection of recognised customary activities.*

2.2.2.3 Other matters

Section 7 of the Resource Management Act 1991 identifies a number of additional matters that the Otago Regional Council must have particular regard to in managing the use, development, and protection of natural and physical resources:

- (a) *Kaitiakitanga:*
 - (aa) *The ethic of stewardship:*
- (b) *The efficient use and development of natural and physical resources:*
 - (ba) *The efficiency of the end use of energy:*
- (c) *The maintenance and enhancement of amenity values:*
- (d) *Intrinsic values of ecosystems:*

- (e) *Repealed:*
- (f) *Maintenance and enhancement of the quality of the environment:*
- (g) *Any finite characteristics of natural and physical resources:*
- (h) *The protection of the habitat of trout and salmon:*
- (i) *The effects of climate change:*
- (j) *The benefits to be derived from the use and development of renewable energy.*

2.2.2.4 Treaty of Waitangi

Section 8 of the Resource Management Act 1991 requires that the Otago Regional Council take into account the principles of the Treaty of Waitangi:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Kai Tahu runanga were consulted throughout the development of this Plan through a Kai Tahu working group. This Plan also includes a chapter outlining the Kai Tahu perspective on, and concerns about, water resources.

Appendix 3 attaches to the Plan statutory acknowledgements for the Otago region, as required by Section 220 of the Ngai Tahu Claims Settlement Act 1998. These acknowledgements comprise a statement made by Ngai Tahu of the particular cultural, spiritual, historic and traditional association of Ngai Tahu with these areas. The inclusion of Appendix 3 is for the purpose of public information only. It does not form part of the Plan.

2.2.3 Other legislation

While this Regional Plan: Water manages the use, development and protection of Otago's water resources under the Resource Management Act 1991, other legislation may have implications for the management of these resources. Activities controlled by this Plan may also require authorisations under other legislation, which include:

- Soil Conservation and Rivers Control Act 1941;
- Historic Places Trust Act 1993;
- Conservation Act 1987 and related legislation;
- Freshwater Fisheries Regulations 1983;
- Lake Wanaka Preservation Act 1973;
- Ngai Tahu Claims Settlement Act 1998;

- Local Government Acts 1974 and 2002;
- Biosecurity Act 1993;
- Building Act 1991 and the Building Code;
- Health Act 1956;
- Transit New Zealand Act 1989;
- Crown Minerals Act 1991; and
- Hazardous Substances and New Organisms Act 1996 and related regulations.

2.2.4 National strategies

At any time the Government may prepare strategies and guidelines concerning the management of resources.

The New Zealand Biodiversity Strategy was published in February 2000 to meet New Zealand's commitment to the international Convention on Biological Diversity (see 2.2.1). The strategy provides a strategic framework for actions to conserve and sustainably use and manage New Zealand's biodiversity.

2.2.5 Water conservation orders and notices

Part IX of the Resource Management Act provides for water conservation orders where there are waters of outstanding amenity or intrinsic value.

The Water Conservation (Kawarau) Order 1997 was enacted on March 17 1997, gazetted on March 20 1997 and came into force on 17 April 1997. The Order has been recognised and provided for within this Plan. The Water Conservation (Mataura River) Order 1997 was gazetted on 10 July 1997 and commenced on 7 August 1991.

Local water conservation notices, under the former Water and Soil Conservation Act, such as those for Lake Tuakitoto and the Pomahaka River have been incorporated into the provisions of this Plan. As stated in section 1.4, these notices formed part of the Transitional Regional Plan and were superseded by the Regional Plan: Water when it became operative.

2.2.6 National policy statements

The Resource Management Act provides for national policy statements to be prepared. Currently there are none that are directly relevant to fresh water. However, as elements of water management will impact on the coastal environment, the New Zealand Coastal Policy Statement (NZCPS) provisions, which relate primarily to the coastal environment, have been considered as necessary.

2.2.7 The Regional Policy Statement for Otago and other regional plans

This Regional Plan: Water must be consistent with the Regional Policy Statement and all other regional plans covering Otago. The Regional Policy Statement is the guiding document for resource management in Otago. It guides all regional and district plans.

Other regional plans for the management of Otago's resources are the Regional Plan: Air, Regional Plan: Coast and Regional Plan: Waste.

The Regional Plan: Air contains rules for activities that this Regional Plan: Water also manages, such as the land application of animal waste and the discharge of pesticides.

The Regional Plan: Coast is concerned with sustainable resource management from the line of mean high water springs to 12 nautical miles offshore (the coastal marine area). This Regional Plan: Water does not deal directly with any matter in the coastal marine area. The boundary between a water body as covered in this Regional Plan: Water and the coastal marine area, is mapped in Schedule 12. In general, all estuaries are within the coastal marine area. The Otago Regional Council intends to ensure that this Plan and the Regional Plan: Coast will be complementary to achieve consistent management for all of Otago's waters.

The Regional Plan: Waste specifically addresses activities including:

- The discharge of hazardous waste;
- The disturbance of land at contaminated sites;
- The operation of facilities for the treatment or disposal of hazardous wastes;
- The discharge of oil or substances containing oil as a dust suppressant on formed roads;
- The discharge of contaminants from landfills (including farm landfills, clean-fill landfills, greenwaste landfills and offal pits); and
- The discharge of contaminants from composting and silage production.

2.2.8 District plans

District plans, developed by territorial local authorities (city and district councils) for the management of land use, may affect the water resource. District plans also cover activities on the surface of water upstream of the coastal marine area. Any district plan within Otago must not be inconsistent with this Plan in regard to any matter of regional significance or for which the regional council has primary responsibility under Part IV of the Act. Some of the policies within Chapters 5 to 10 of this Plan may be implemented through rules in district plans. Formal transfer of some regional council powers and functions to territorial local authorities may occur from time to time.

2.3 Other resource management documents

In accordance with Section 66 of the Act the Otago Regional Council had regard to a variety of additional documents (not illustrated in Figure 2) when preparing this Plan. These included:

- Otago Conservation Management Strategy;
- Kai Tahu ki Otago – Natural Resource Management Plan;
- South Island Eel Management Plan;
- New Zealand Historic Places Register;
- The regional policy statements and regional plans of adjacent jurisdictions; and
- The former Lake Tuakitoto and Lake Hayes management strategies.

3

Regional Description



3.1 Introduction to the water resources of Otago

Water is an integral part of Otago's natural environment. The region has a very significant water resource, as surface water (in lakes and rivers), as groundwater (in aquifers), and as wetlands. Groundwater is water that occupies or moves through spaces in geological formations under the surface of the land. Surface water results either directly from precipitation, or from groundwater that has come to the surface. Wetlands are treated as a distinct water resource in this Plan. The Otago Regional Council is responsible for promoting the sustainable management of these water resources.

This chapter provides background information on the characteristics of surface water, groundwater and wetland resources of Otago, and gives a brief overview of the region's major water bodies. It also describes the subregions as defined for the Plan, providing a short summary of the environmental context in which the water resources occur. Schedule 1 of this Plan provides greater detail on the natural values of the lakes and rivers in each of the subregions listed in this chapter.

3.2 The water resources of Otago

3.2.1 Surface water

Otago's distinctive character is often derived from its lakes, rivers and wetlands. For centuries, Otago's people and communities have used water to provide for their social, economic and cultural well being. This is evidenced in the wide range of heritage values associated with lakes and rivers: from the use of rivers as transport routes by Polynesian settlers, through to their importance in gold mining, some early remnants of which are still visible. The character of the region's water bodies is diverse, reflecting the variation in environmental conditions throughout.

Otago contains many lakes of varying size. Approximately 23% of New Zealand's lake surface area, occurs in Otago. The Clutha River/Mata-Au drains much of the Otago region and is the largest river in New Zealand in terms of the quantity of water carried each year. Seventy five percent of the total flow of the Clutha River/Mata-Au at Balclutha results from the catchments of the three major features of Otago's Lakes district: Lakes Hawea, Wanaka and Wakatipu. Important rivers feeding into the Clutha catchment include the Cardrona, Lindis, Shotover, Nevis, Fraser, Manuherikia and Teviot. The Clutha and its principal tributary, the Kawarau River, pass through spectacular gorges, two of which are dammed for hydro-electricity generation. One of the larger tributaries of the Clutha in its lower reaches is the Pomahaka River, which rises in the mountains above Tapanui.

The second largest catchment in Otago is that of the Taieri River. Rising in the uplands of Central Otago, it snakes among the block mountain ranges before passing through an incised gorge and crossing the Taieri Plain. There it joins the waters of the Lake Waipori and Waihola catchments and becomes tidal before making its way through another gorge to the sea at Taieri Mouth. Its catchment area totals 5650 square kilometres.

Other significant Otago rivers drain the coastal hills in catchments of varying character. In the north, the Kakanui, Waianakarua, Shag and Waikouaiti Rivers rise in high country and pass through predominantly dry downlands. The Tokomairiro River drains rolling country between the Taieri and Clutha catchments. Rivers to the south of Otago, particularly the Catlins area, emerge from wetter, often forested hills.

The environmental context in which Otago's water bodies exist is characterised by:

- High rainfall in the Southern Alps,
- Occasional very low rainfall in the semi-arid Central Otago valleys, with high seasonal evaporation rates and no guarantee of irrigation water availability, and
- High erosion risk in places.

These conditions leave their mark on Otago's water bodies, such as the Shotover River's distinctive colour resulting from a combination of high rainfall and erosion.

Despite the generally large water volumes present in the region, some parts of Otago are among the driest areas in New Zealand. Several rivers in Otago are characterised as being water-short, including the Taieri, Shag and Kakanui Rivers and tributaries. The lack of water is observable in the many small stream stretches, which completely dry up each summer.

3.2.2 Groundwater

Groundwater occurs in many parts of the region and many of Otago's people and communities have come to rely upon this water to provide for their social, economic and cultural well being. There are a number of localities in Otago where groundwater is of particular significance due to existing use or potential demand. At present all of Otago's many aquifers have water of useable quality.

3.2.3 Wetlands

Wetlands are an important component of Otago's water resource. They provide a diverse set of landscape elements, including high altitude blanket bogs and string bogs, saline areas, swamp forest remnants, shallow lake complexes, estuarine saltmarshes and valley floor swamps. These are of particular significance due to their scarcity and ecological and cultural values.

High altitude wetlands, such as those on Otago's block mountain ranges, are often considered important for supporting summer stream flows, as well as their near-pristine ecosystems. Wetlands in more developed landscapes are also valuable sanctuaries for wildlife and mahika kai for Kai Tahu.

Otago contains several large wetland systems of significance for wildlife including the Upper Taieri scroll plain wetland complex and the Waipori/Waihola wetland complex. Lake Tuakitoto has considerable values,

which have been recognised by a Local Water Conservation Notice, the elements of which are carried through into this Plan.

3.3 Subregions of Otago

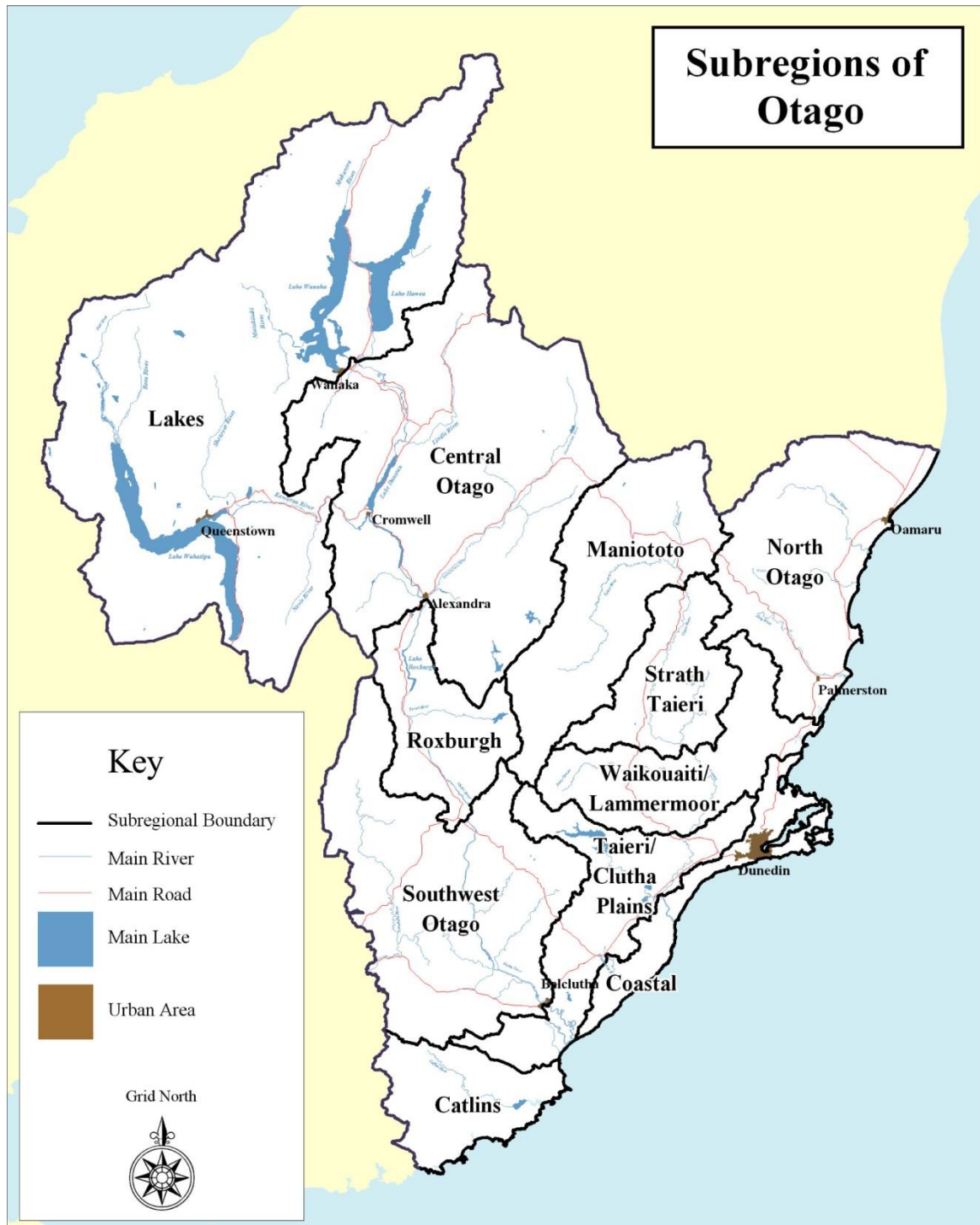


Figure 3: Map of subregions of Otago

3.3.1 North Otago subregion

The North Otago subregion extends from the Waitaki River in the north to the Pleasant River in the south and includes the catchments of the Shag, Waianakarua and Kakanui Rivers. These and other catchments in the subregion are naturally subject to low flows, particularly between November and April, due primarily to climatic factors.

North Otago is not as dry as some inland areas but still experiences a relatively low rainfall. Rainfall varies from less than 600 mm per annum near Oamaru, to in excess of 1000 mm per annum in the Kakanui Mountains. The majority of the coastal downlands have rainfalls in the order of 600 to 700 mm per annum.

The subregion's most highly used aquifers are:

- Lower Waitaki Plains Aquifer;
- Papakaio Aquifer;
- North Otago Volcanic Aquifer;
- Kakanui-Kauru Alluvium Aquifer; and
- Shag Alluvium Aquifer.

3.3.2 Maniototo subregion

This subregion comprises the upper catchment of the Taieri River and is defined by Rough Ridge to the west, the Rock and Pillar Range to the east and the Mount Ida Range and Kakanui Mountains in the north.

The Maniototo Basin experiences very low rainfalls, approximately 400 mm per annum, although higher rainfalls occur in the block mountain uplands surrounding the basin (e.g. 1600 mm per annum on the Rock and Pillar Range). Numerous small streams rising around the basin, for example the Hogburn, are fed by snow-melt, but often have dry stretches by late summer.

The Kye Burn is an important tributary of the Taieri River in this subregion. The Maniototo Irrigation and Hydro Electric Power Scheme (MIHEPS) is a major water augmentation system operating in the Taieri River main stem.

Much of the Maniototo Basin is underlain by an aquifer, known as the Maniototo Aquifer.

3.3.3 Central Otago subregion

Central Otago is a large subregion defined by Rough Ridge in the east, Hawkdun Range, Lindis and Cardrona river catchments in the north, Old Woman and Old Man/Kopuwai ranges to the west and Knobby Range in the south. The landscape is dominated by block mountain and basin topography.

Parts of this subregion have the lowest rainfall in New Zealand, with areas of low elevation experiencing approximately 350 mm per annum, and containing a large area of semi-arid land. Areas in the ranges, particularly in the Cardrona catchment, can however receive in excess of 1400 mm of rainfall per annum.

The Clutha/Kawarau main stem is the dominant feature of the subregion's water resources, carrying the water eastwards out of Central Otago, and is dammed at Clyde, creating Lake Dunstan. One of the more important tributaries of the Clutha here, the Manuherikia River, is used as a delivery system to provide stored water to irrigators.

There are a number of aquifers in the subregion, which are growing in importance. These are:

- Dunstan Flats Aquifer;
- Earnscliffe Terrace Aquifer;
- Hawea Basin Aquifer (part of);
- Wanaka Basin Cardrona Gravel Aquifer (part of); and
- Cromwell Terrace Aquifer.

There is also an aquifer in the Tarras area (not mapped in this Plan).

3.3.4 Lakes subregion

The Lakes subregion contains a large area of high country and is dominated by the glacial lakes: Lake Wakatipu, Lake Wanaka and Lake Hawea. Catchments are variable in size, with reliable flows.

Rainfalls vary between about 600 mm per annum in the part of the Kawarau Gorge in this subregion, to in excess of 8000 mm per annum in some parts of the Southern Alps which form the headwaters of many of the catchments feeding the Clutha River/Mata-Au system.

The Lake Hawea control structure has an influence on the water level of Lake Hawea and the flow in the Hawea River.

Aquifers in the subregion include the Wakatipu Basin Aquifer and parts of the Hawea Basin and Wanaka Basin Cardrona Gravel Aquifers. There are also aquifers in Glenorchy and Kingston areas (not mapped in this Plan).

3.3.5 Roxburgh subregion

The Roxburgh area is a small subregion defined by the Umbrella and Old Man ranges/Kopuwai in the west and Knobby Range and the Teviot River catchment to the east.

Rainfalls vary from 600 mm per annum in the Clutha Valley to about 1400 mm per annum on the Old Man/Kopuwai Range.

The Clutha River/Mata-Au is the dominant water feature of the subregion, and is dammed at Roxburgh, creating Lake Roxburgh. However, there are numerous small catchments in the upland areas flanking the Clutha.

The subregion's most highly used aquifers are the Roxburgh Basin Aquifer and the Ettrick Basin Aquifer.

3.3.6 Strath Taieri subregion

The Strath Taieri, a valley between the Rock and Pillar Range in the west and Taieri Ridge to the east, is dominated by the Taieri River. The subregion is defined by these block mountain uplands which have many small catchments draining into the Taieri.

The flows in these catchments vary, reflecting a range of rainfalls, from 600 mm per annum on the river flat to more than 1600 mm per annum on the often snowy tops of the Rock and Pillar Range. Catchments on Taieri Ridge frequently dry up in summer.

Groundwater occurs in an aquifer within this subregion (not mapped in this Plan).

3.3.7 Waikouaiti/Lammermoor subregion

The Waikouaiti/Lammermoor subregion is primarily hill country drained by the catchments of the Waikouaiti River, which flows to the sea, and Deep Stream and Lee Stream, which are tributaries of the Taieri River. The Taieri cuts across the middle of the subregion in the deeply incised Taieri Gorge.

Being high in elevation, most areas experience in excess of 1000 mm of rainfall per annum.

A significant proportion of Dunedin's water supply is derived from the rivers in these uplands.

3.3.8 Coastal subregion

The Coastal subregion consists of the Otago Peninsula, including Dunedin, and the Chain Hills from Swampy Summit south to the mouth of the Clutha River/Mata-Au.

Rainfalls vary between 700 mm per annum near Taiaroa Head to in excess of 1400 mm per annum on Swampy Summit and Mount Cargill.

Catchments in the Coastal subregion are characteristically small and are drained by streams which have low and unreliable flows, particularly in summer and autumn. The subregion also contains the lower gorges and mouths of two larger rivers: the Taieri and Tokomairiro rivers.

3.3.9 Taieri/Clutha Plains subregion

This subregion contains sections of the Taieri and Clutha/Mata-Au rivers as they emerge onto their floodplains, as well as the Tokomairiro and Waipori river catchments. The Waipori River was dammed at Waipori for hydro-electricity generation, creating Lake Mahinerangi. Most other catchments are characteristically small and the streams that flow from them, such as the Puerua River and Lovells Stream, form tributaries of the above rivers.

Rainfalls vary between less than 700 mm per annum on the Lower Clutha and Lower Taieri Plains to in excess of 1600 mm per annum in the Lammerlaw Range in the north.

Some groundwater is taken from aquifers within the Taieri (Lower Taieri Aquifer) and Tokomairiro Plains (not mapped in this Plan).

3.3.10 Southwest Otago subregion

Southwest Otago consists of several catchments flowing into the lower Clutha, the largest of which is the Pomahaka. Other significant catchments in Southwest Otago are the Waiwera, Waitahuna and Tuapeka. The Clutha River/Mata-Au enters the subregion northwest of Beaumont and leaves at Balclutha.

Rainfalls vary between 700 mm per annum in the Lower Clutha Valley to in excess of 1200 mm per annum on top of the Blue Mountains, and about 1400 mm in the Umbrella Mountains at the head of the Pomahaka.

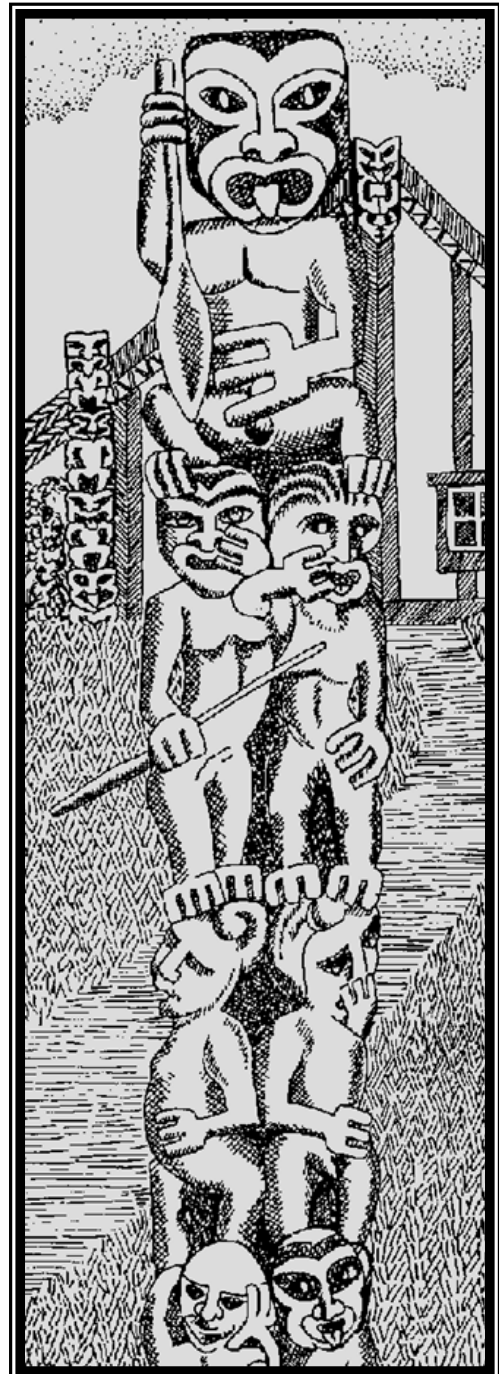
3.3.11 Catlins subregion

The Catlins subregion in southeast Otago is characterised by its native forest remnants, with several water bodies, such as the Maclellan and Tautuku Rivers, in largely unmodified, natural states. The Owaka and Catlins river catchments, like many within the subregion, are small to moderate in size, with reliable flows.

Rainfalls are among the highest in Otago and are in excess of 1600 mm per annum within forested upland areas.

4

Kai Tahu ki Otago Water Perspective



4.1 Whakatauki

“He taura whiri kotahi mai ano te kopunga tai no i te pu au”

“From the source to the mouth of the sea all things are joined together as one”

4.2 Tauparapara

Ko te Tititea te mauka	<i>Mt Aspiring is the peak</i>
Ko Nga Tiri Tiri o Te Moana te tahuhu	<i>The southern Alps are the backbone</i>
Ko Hawea, Wanaka me Whakatipu-wai-maori nga roto	<i>Hawea, Wanaka and Whakatipu-wai-maori are the water bodies</i>
Ko Mataau te awa	<i>Mataau is the river (Clutha)</i>
Ko Te Kopuwai te taniwha	<i>Kopuwai is the guardian</i>
Ko Araiteuru te tai	<i>Araiteuru is the tide</i>
Ko Moana nui a kiwa te moana	<i>Moana-nui-a-kiwa is the ocean</i>
Ko Kai Tahu whanui te iwi	<i>Kai Tahu, Kati Mamoe and Waitaha are the people</i>

4.3 Manawhenua

Representatives of Te Runanga o Moeraki, Kati Huirapa Runanga ki Puketeraki, Te Runanga Otakou, Hokonui Runanga, Otokia Whanau, Moturata Taieri Whanau and South Otago Runanga provide this perspective on behalf of Manawhenua of the Otago region.

4.4 Kai Tahu’s water resource objective

Kai Tahu’s objective with respect to the management of Otago’s water resource is to ensure consistency with the values of Kai Tahu whanui and to be involved in that management through:

- (a) Participation in the planning, implementation and monitoring of the objectives, policies and methods adopted by resource managers; and
- (b) Participation in the use, development, and protection of water resources.

4.5 Kaitiakitanga

The responsibility for exercising kaitiakitanga in the Otago region is that of Kai Tahu whanui. Mana and kaitiakitanga are interlinked, those with mana over a region are also kaitiaki to the water resources within that region. Kaitiakitanga is the practical expression of rangatiratanga (authority), it involves the exercise of customary authority over the way a resource is used, managed and protected. To achieve implementation of kaitiakitanga in the present day, consistent with cultural needs, requires a commitment from those

exercising statutory authority to the use of consultation, participation and decision-making processes that directly involve Kai Tahu ki Otago.

Kai Tahu will measure the effectiveness of its opportunities to exercise kaitiakitanga against environmental outcomes. The outcomes sought by Kai Tahu are the continued health and well being of the water resources of the region and cultural usage of these resources.

4.6 Mauri

Giving recognition to the importance of the mauri of all waters is central to the concept and practice of kaitiakitanga from which stems the responsibility and authority to seek maintenance and, where required, improvement of the mauri for all water bodies. The mauri or life force of water is sacred, a value that originates from the dawning of time, and is a link to the very source of tribal creation traditions. A water body with an intact mauri will sustain healthy ecosystems, support mahika kai, provide resource use options and be a source of pride and identity to the people. Culturally, water is regarded with both respect and as a tool to be utilised in a way that does not detrimentally modify the mauri that has sustained successive generations.

4.7 Cultural importance

Water has an important place in ceremonial occasions and is particularly recognised where the cultural components of tapu and noa are at work. Water symbolises the spiritual link between the present and the past, the never-ending source of life, for generations that have gone before and those to follow.

Kai Tahu's priority is to maintain the properties of water that are necessary to ensure the sustainability of customary uses. Customary uses range from the use of water for ceremonial purposes to the maintenance of the quality and quantity of water to sustain mahika kai populations and habitats.

4.8 Mahika kai

The mahika kai custom of producing or procuring food resources from a range of resources throughout the region on a seasonal basis is a fundamental basis of the traditional economy. Maintenance of the custom and knowledge associated with the natural resource is governed by lore. Transfer from one generation to the next of the cumulative knowledge is tied to practical use and management of the mahika kai resource. The water resources of the Otago region provide mahika kai directly, provide ecosystem support for mahika kai species, and support other significant mahika kai environments, for example forest and coastal areas. Sadly, the waterborne mahika kai resource represents a remnant of a once significant resource that has potential for rejuvenation. The elevation in status and priority of the indigenous fishery habitat from a situation of neglect to a valued and unique resource is central to the process of enhancement of Otago's water resources.

4.9 Legislative recognition

Legislation that governs the way resources are used and managed today is giving increased recognition to traditional values and management models.

A principal reason for change has been the recognition given the Treaty of Waitangi, and in particular Article II, which guarantees to protect the chiefly authority that iwi hold over their land, villages and all their taoka. The Maori version is even more explicit in its emphasis on the rangatira authority that iwi and hapu are guaranteed in the use, access and protection of their resources, which include water bodies. The principles of the Treaty have been incorporated into recent legislation developed for governance of the use and management of natural resources. The ‘principles’ are gaining strength and clarity through case law and precedent.

At the heart of the Treaty Claim submitted by Kai Tahu to the Waitangi Tribunal was the Crown’s failure to honour their contractual obligation to provide for Kai Tahu through the land purchase agreements, in particular:

- (a) failure to provide ample reserves for their present and future benefit; and
- (b) their numerous mahika kai were not reserved and protected for their use.

The Waitangi Tribunal found in favour of Kai Tahu on these issues, particularly in respect of the Kemps 1848 Deed. A number of recommendations were made by the Tribunal which included that remedial action be taken by the Crown to ensure that consultation with Maori is implemented by those with statutory responsibility for the management and protection of the environment, which includes water resources.

As a result of increased recognition of the Treaty, instigated primarily through a number of significant Waitangi Tribunal claims and decisions of other courts, has been the introduction into environmental legislation of Treaty Principles and provision for the recognition of Maori values.

4.10 Natural Resource Management Plan

Kai Tahu ki Otago have identified a range of objectives in their Natural Resource Management Plan (December 1995) to which local authorities and developers need to have regard. They are:

- Recognition of the spiritual and cultural significance of water to Kai Tahu, a value that binds the identity of the iwi to water, and protects the mauri of all water bodies;
- Recognition of wetland systems as an important source of mahika kai, habitat for native flora and fauna, and as a tool for the maintenance of water quality;
- Elimination of the discharge of human waste and other contaminants to water;
- Use of surveys and data collection systems to provide a comprehensive information base on water resources and threats to the life sustaining capacity of water; and
- Establishment of a management regime that identifies water quality and quantity standards consistent with Kai Tahu cultural and spiritual values.

4.11 Management of waters

Kai Tahu have a vision that will see a positive transition from the grievance mode that has bedevilled their culture for over 150 years, caused through the substantial loss and degradation of their resources and suppression of the rangatira authority traditionally exercised over their taoka. Today this vision is becoming more relevant through the validation of values and cultural relationships with resources which are central to the core of Kai Tahu identity.

The process of how this works in practice is being addressed through for example, implementation of the Resource Management Act 1991, the spirit of change, the re-validation of the Manawhenua role through consultation, and development of partnership models.

The ability for Kai Tahu whanau and hapu to re-commune with the places and resources of traditional value to their cultural customs is important. The involvement of Kai Tahu in the management decisions affecting the use and protection of the water resources of Otago is essential. The opportunity for Kai Tahu to be actively involved in the monitoring and enhancement programmes for water and habitat improvement is a vital part of that process. In some cases Kai Tahu may seek full control of some resources through a transfer of powers under Section 33 of the Resource Management Act 1991. That section enables the transfer of powers, providing the body to which power is to be transferred meets a number of criteria including having the technical or special capability or expertise. A special consultative process, pursuant to Section 83 of the Local Government Act 2002, must be undertaken before any transfer of power can proceed.

4.12 Identifying Kai Tahu cultural and spiritual beliefs, values and uses

The identification of Kai Tahu cultural and spiritual beliefs, values and uses supported by the region's water bodies is an important means by which Kai Tahu resource use priorities can be provided for in the planning and implementation stages. The process requires detailed and current information on the values for each water body, and identification of activities and community expectations for the use and management of the region's water bodies. A clear direction for the management, use and enhancement of individual water bodies must give effect to the interests of Kai Tahu. A number of Kai Tahu management guidelines for water management are articulated in the Kai Tahu Ki Otago Natural Resource Management Plan. A Te Runanga O Ngai Tahu Freshwater Policy Statement has been prepared and provides further articulation of Kai Tahu's water perspective.

The principle that all waters and water bodies should be managed to achieve enhancement of Otago's water resources is essential.

4.13 Issues of concern to Kai Tahu

The following issues describe significant concerns of Kai Tahu for their cultural heritage in relation to the water resources of Otago. The cross-references provide links to related provisions elsewhere in this Plan.

The issues and explanations expressed below in 4.13.1 to 4.13.9 describe the significant concerns of Kai Tahu, as expressed by Kai Tahu.

4.13.1 Traditional environmental management systems and values, which include mauri, tapu and rahui, have not been adequately recognised by planning and resource consent processes.

Explanation

The practical implementation of Maori values including mauri, rahui and tapu in the management of the region's water resources will give recognition and effect to the place and role of indigenous values consistent with the provisions of the Resource Management Act.

See Objective: 5.3.2

See also Objectives: 6.3.5, 7.A.2 and 10.3.1

4.13.2 Significant loss of the traditional mahika kai resource and its supporting habitat, or loss of access to it, has occurred and could continue to occur, through:

- (a) **The consumptive use of water which leads to insufficient flows to support aquatic life;**
- (b) **The development and use of the beds and margins of lakes and rivers;**
- (c) **The placement of structures obstructing migration of aquatic indigenous species;**
- (d) **Artificial fluctuation of levels in lakes and rivers affected by hydro-electricity generation or storage; and**
- (e) **The introduction of aquatic fauna to areas where they were not previously present.**

Explanation

The water-based mahika kai resource was a significant part of traditional food. In actual practice it was also a means for the transfer of knowledge from one generation to another, of the customs relating to the mahika kai resource, habitat, places, placenames, seasons, rights to the resource, trails, tribal history and tradition relating to the area. Loss of the mahika kai resource and habitat, or of access to the resource therefore constitutes a greater loss than the loss of the resource itself.

Kai Tahu believes that past management has resulted in over-allocation of water from some catchments. Kai Tahu also believes that the placement of some structures in rivers has resulted in disruption to fish migration and the natural habitat of mahika kai when flows or levels were modified. Predation by, or competition for food or habitat from, introduced species has also contributed to a loss of the mahika kai resource. This loss constitutes one of the main components of the Ngai Tahu Claim submitted to the Waitangi Tribunal. There could be ongoing loss of the remaining mahika kai resource, or of Kai Tahu access to it.

See Issues: 5.2.1, 5.2.2, 5.2.3
See Objectives: 5.3.2 and 10.3.1

4.13.3 Development and use of the beds and margins of lakes and rivers can result in adverse effects on waahi taoka and waahi tapu and Kai Tahu access to them.

Explanation

The effects of a range of activities, including gravel and gold mining activities, river stabilisation works, farming activity within riparian margins and erection of structures on the beds and margins of lakes and rivers have the potential to harm a range of archaeological sites. Many waahi tapu are located on, or are adjacent to, the beds of water bodies, and may be adversely affected by such activities. Loss of access to traditional waahi taoka and waahi tapu sites can also occur as a result.

See Issue: 5.2.2
See Objective: 5.3.2

4.13.4 Cross mixing of water from one catchment to another may adversely affect the mauri of the catchments.

Explanation

The mauri, or life force, of individual catchments is special and distinct, and the characteristics of each differ depending on whether the source is from snow-capped mountains, lakes, lowland runoff or groundwater. This is further influenced by the natural characteristics of the water body, soil type, structure of the river bed, flow, degree of pollution, and contamination from exotic weeds. Historically, those extracting water from one catchment for eventual release to another, have failed to take into account effects on the health and vitality of the affected waters and habitat, or on Kai Tahu cultural and spiritual beliefs, values and uses.

See Issue: 6.2.5
See Objectives: 5.3.2 and 6.3.5

4.13.5 Discharge of human waste and other contaminants to Otago's water bodies from point and non-point sources is an affront to Kai Tahu.

Explanation

The discharge of untreated and treated human waste and other contaminants to water bodies is particularly offensive to Kai Tahu, since water is of both spiritual and practical importance to the indigenous culture of Otago. Degradation of any water body undermines the enduring cultural relationship iwi have traditionally enjoyed and seek to retain with their waters. In addition, the custom of gathering food (mahika kai) from water bodies is jeopardised, since the practice of consuming food gathered from resources contaminated by, in particular, human wastes is abhorrent to iwi. Severance of the spiritual relationship with, and of the customary use of, a water body strikes at the very identity and well being of the indigenous culture. This causes a failure as

kaitiaki to protect and pass on to the next generation an intact mahika kai custom.

See Objective: 5.3.2

4.13.6 Many wetlands of significance to Kai Tahu have been lost, and their loss could continue.

Explanation

Wetlands have traditionally been places for gathering mahika kai and a range of other cultural materials important to the customs and economy of Kai Tahu. The loss to Otago of a significant proportion of the wetland resource has had a dramatic impact on the indigenous culture of Otago. Some remaining values of wetlands are highly valued by Kai Tahu iwi, runanga or whanau, and they are considered irreplaceable.

See Objective: 10.3.1

4.13.7 The impact land use has had on adjacent water, particularly in lower catchment areas, has adversely affected Kai Tahu cultural and spiritual beliefs, values and uses.

Explanation

Kai Tahu has an interest in land use activities throughout a catchment, because:

- Kai Tahu's relationship with a water body extends from its source in the mountains to its entry to the sea;
- Mahika kai species are migratory and at different stages of their lifecycle live in different habitats throughout a catchment; and
- Kai Tahu use different parts of the catchment for different purposes at different times of the year.

Kai Tahu is concerned that an emphasis has been placed on the use and development of land without sufficient consideration being given to the resulting impact on the water resource. The traditional use options and relationship with water resources are compromised in the process.

See Objective: 5.3.2

4.13.8 Restoration and enhancement programmes may be required for water bodies and catchment areas suffering degradation due to developmental pressure.

Explanation

A general decline in the quality and habitat of Otago's water bodies over the last 150 years has occurred as a result of community and individual decisions to use natural and physical resources in a variety of ways that detrimentally impacted on the environment. Failure to recognise or act on the steady deterioration has resulted in a net loss of the cultural and spiritual beliefs, values and uses of Kai Tahu ki Otago.

Restoration of the ecological and cultural values of degraded waters is a fundamental principle of Maori environmental management. Restorative actions, including enhancing low flows, improving water quality, and habitat enhancement, creation and restoration, are priorities for water bodies of particular significance to Kai Tahu.

See Chapter 7

4.13.9 The traditional relationship of Kai Tahu and their associated values with the water resource has been overlooked in the monitoring of the region's water resources.

Explanation

Monitoring of the state of water resources, monitoring compliance with resource consents and other information gathering processes have been inadequate in producing the level of information required to make sound management decisions. Integration of Kai Tahu cultural and spiritual beliefs, values and uses associated with water bodies, into the data gathering system is required.

See Chapter 19

There are no objectives or policies within this chapter.

5

Natural and Human Use Values of Lakes and Rivers



5.1 Introduction

Water and water resources have played a critical role in the development of Otago. As such, there is a history of long-standing or traditional use of water including Kai Tahu customary uses and, following European settlement, mining, irrigation, recreation, fishing, hydro-electric power generation and waste disposal. The beds and margins of lakes and rivers provide for a range of use and development functions as well.

This Plan seeks to enable people and communities to provide for their social, economic and cultural well being through the appropriate use, development and protection of lakes and rivers and their margins, and other water resources. To achieve this, the Plan recognises the dependence of people and communities on long-standing and traditional uses of these resources, and the need for continued use and development. However, in enabling continued use and development, it is important that adverse effects on the existing natural and human use values supported by lakes and rivers and their margins are avoided, remedied or mitigated.

This chapter provides for the natural and human use values supported by Otago's lakes and rivers and their margins. These characteristics are important to, or are an essential part of, ecological communities, or are enjoyed or utilised by people and communities, including Kai Tahu.

Schedule 1 identifies particular natural and human use values supported by Otago's lakes and rivers. These are:

- (a) Ecosystem values, outstanding natural features and landscapes, significant habitat of indigenous fauna and significant indigenous vegetation and the degree of development (Schedule 1A);
- (b) Water supply values (Schedule 1B);
- (c) Registered historic places (Schedule 1C); and
- (d) Spiritual and cultural beliefs, values and uses of significance to Kai Tahu (Schedule 1D).

The Plan also identifies significant wetlands in Schedule 9. While these wetlands have significant natural and human use values they are addressed separately in Chapter 10 Wetlands, where the objective is to maintain or enhance wetland values.

Schedule 1 does not specifically identify natural character, amenity, existing lawful uses or all heritage values. This is because every lake and river contains some element of natural character or provides some amenity, and most are, or have been, used for economic, cultural and social benefit in some way. However, these are still important natural and human use values and, as such, are dealt with in this chapter.

The maintenance or enhancement of natural and human use values is a fundamental principle of this Plan. These values can be adversely affected by the use, development or protection of land or water resources, including:

- (a) The taking, damming and diversion of surface water, including the management of lake levels;
- (b) The taking of groundwater (since this activity can affect surface water);

- (c) Discharges to water, and onto or into land in circumstances which may result in a contaminant entering water;
- (d) Land use activities, particularly those in, on, under or over the bed or margins of lakes or rivers.

This chapter contains issues, objectives and policies that apply to all of these activities as they may adversely affect natural and human use values. Chapters 6 to 9 address the more specific elements relating to these same activities.

5.2 Issues

5.2.1 The use and development of Otago's water resources, lakes and rivers may have the potential to:

- (1) Adversely affect:
 - (a) Outstanding natural features and landscapes;
 - (b) Areas with a high degree of naturalness;
 - (c) Indigenous vegetation, habitats of indigenous fauna, and habitats of trout and salmon;
 - (d) Ecosystem values;
 - (e) Water supply values;
 - (f) Heritage values of sites, buildings, places or areas;
 - (g) Natural character;
 - (h) Amenity values; and
 - (i) Existing lawful activities; and
- (2) Cause or exacerbate flooding, erosion, land instability, sedimentation or property damage, associated with the region's lakes and rivers.

Explanation

Otago's lakes and rivers support considerable natural values, identified in (a) to (d) of the issue above. These natural values have considerable intrinsic worth. They can, however, be highly valued by the region's people and communities due to the opportunity for a wide range of recreational and aesthetic appreciation. Human use values, identified in (e) to (i) of the issue, are those elements which involve either active or passive human use of water resources. The second part of the issue identifies the possibility that use and development can cause or exacerbate adverse effects from hazards.

The region's lakes and rivers are diverse and the natural and human use values supported by them vary. Most of the natural and human use values included in the issue are identified for particular lakes and rivers, or groups of such water bodies, in the following schedules to this Plan:

- (i) Schedule 1A for values (a) to (d);
- (ii) Schedule 1B for value (e); and

- (iii) Schedule 1C for registered historic places, which comprise part of value (f).

Schedule 1 is not intended to specifically identify natural character, amenity values, existing lawful uses of resources, archaeological sites, or sites, buildings, places or areas with interim historic place registration, as many of these are difficult to specify, or will change over time. Because these values apply generally to every lake or river, they need to be investigated on a case-by-case basis.

Any use of water that affects the water in a lake, river or aquifer, or the water body itself, can adversely affect the natural and human use values supported by lakes or rivers. Activities of particular concern are:

- (a) The taking, damming and diversion of water; and
- (b) Discharges to water, and to land in circumstances which may result in a contaminant entering water.

Any reduction in the ability of lakes and rivers to support natural and human use values, which is caused by these activities, is of concern due to the importance of the values to Otago's ecosystems and to the region's present and future generations.

Objectives: 5.3.1, 5.3.3, 5.3.4, 5.3.6, 5.3.7, 5.3.8; Objectives in Chapters 6 to 9

Policies: 5.4.1, 5.4.2, 5.4.3, 5.4.5, 5.4.8 to 5.4.13, 8.5.1

5.2.2 Land use activities, including those in, on, under or over the bed or margins of lakes and rivers, can degrade the natural and human use values supported by Otago's lakes and rivers.

Explanation

Land use activities can degrade water resources, in terms of water quantity, water quality and the natural character of lakes and rivers. Natural events, such as flooding, can also adversely affect natural and human use values. Such effects are addressed in Chapter 8. Land uses can also exacerbate the adverse effects of natural events. Activities in, on, under or over the bed or margin of lakes and rivers, including activities associated with structures, alteration of the bed or the management of vegetation, can have direct adverse effects on such water bodies. Land uses that occur beyond the margins of lakes and rivers also have the potential to adversely affect water. Some land uses can increase the volume of contaminants entering a lake or a river, and land use change can lead to changes in flood characteristics and catchment yield. Any degradation of the water resource is likely to adversely affect the natural and human use values supported by the water body.

Objectives: 5.3.1, 5.3.3, 5.3.4

Policies: 5.4.1, 5.4.2, 5.4.5, 5.4.8 to 5.4.13

See also: Chapter 7, Chapter 8

5.2.3 The use and development of water resources, and activities in, on, under or over the beds or margins of Otago’s lakes and rivers can reduce existing public access to and along such margins.

Explanation

The use and enjoyment of Otago’s water resources is important to Otago’s people and communities, and visitors to the region. Public access to or along the margins of lakes or rivers provides the opportunity to experience the many uses and values of the water resource. The importance of public access is recognised by Section 6(d) of the Resource Management Act and Policy 6.5.10 of the Regional Policy Statement for Otago, where provision is made to maintain and enhance public access to and along lakes and rivers except where restriction is necessary for the protection of certain natural and human use values, and in other circumstances, as specified in Policy 5.4.6.

Objectives: 5.3.5

Policies: 5.4.6, 5.4.7, 5.4.13

5.3 Objectives

5.3.1 To maintain or enhance the natural and human use values, identified in Schedules 1A, 1B and 1C, that are supported by Otago’s lakes and rivers.

Explanation

Otago’s lakes and rivers contain significant natural and human use values, which vary throughout the region. These are identified for specific lakes and rivers, or groups of such water bodies, in Schedules 1A, 1B and 1C of this Plan. These schedules are not exhaustive, but reflect the level of knowledge of individual water bodies during the Plan-making process and may be amended through a Plan Change. This objective not only seeks to avoid the loss or degradation of the specified values, but also provides for their enhancement.

Principal reasons for adopting

This objective is adopted to ensure that water use and land use activities are managed so that the natural and human use values supported by Otago’s lakes and rivers can continue to exist. These values are significant due to the opportunity for enjoyment or appreciation by the region’s people and communities, and their own intrinsic value.

Policies: 5.4.1, 5.4.2, 5.4.5, 5.4.8, 5.4.9, 5.4.11, 5.4.12, 5.4.13, 8.5.1

5.3.2 To maintain or enhance the spiritual and cultural beliefs, values and uses of significance to Kai Tahu, identified in Schedule 1D, as these relate to Otago’s lakes and rivers.

Explanation

Chapter 4 of this Plan identifies the issues of concern to Kai Tahu. The issues reflect the strong relationship Kai Tahu have with Otago’s lakes and rivers through their spiritual and cultural beliefs, values and uses associated with water. These beliefs, values and uses are identified for specific lakes and rivers in Schedule 1D of this Plan. This objective seeks to avoid their loss or degradation

and, where possible, enhance them. These schedules are not exhaustive, but reflect the level of knowledge of individual water bodies during the Plan-making process and may be amended through a Plan Change.

Principal reasons for adopting

This objective is adopted to protect the relationship Kai Tahu have with Otago's water resources. It is intended to ensure that Kai Tahu spiritual and cultural beliefs, values and uses associated with water can continue. The importance of this provision is recognised by Section 6(e) of the Resource Management Act and the Regional Policy Statement for Otago.

Policies: 5.4.1, 5.4.2, 5.4.4, 5.4.6; Policies in Chapters 6 to 10

5.3.3 To protect the natural character of Otago's lakes and rivers and their margins from inappropriate subdivision, use or development.

Explanation

The natural character of Otago's lakes and rivers and their margins is made up of a range of physical, ecological and cultural qualities. These relate to the lake's or river's topography, including the setting and bed form, natural flow and level characteristics, ecology, and the extent of development within the catchment. The degree of natural character and what is considered to be inappropriate subdivision, use and development, will vary from place to place.

Principal reasons for adopting

This objective is adopted to ensure that the effects of activities that use land or water do not reduce the natural character of lakes and rivers and their margins. Otago's people and communities value this natural character and its protection is a matter of national importance under Section 6(a) of the Resource Management Act.

Policies: 5.4.2, 5.4.5, 5.4.8, 5.4.11 to 5.4.13

5.3.4 To maintain or enhance the amenity values associated with Otago's lakes and rivers and their margins.

Explanation

The amenity values associated with Otago's lakes and rivers and their margins are the natural and physical qualities and characteristics that contribute to people's appreciation and enjoyment of the water body. This appreciation and enjoyment relates to the pleasantness, aesthetic coherence and cultural and recreational attributes of a lake or river. The ability to appreciate amenity values may be facilitated by physical development such as structures and through access provisions.

Principal reasons for adopting

This objective is adopted to ensure that activities that use land or water do not remove or reduce opportunities for the enjoyment or appreciation of Otago's lakes and rivers, and where appropriate to provide for the enhancement of amenity values. This reflects the importance of amenity values to the region's people and communities.

Policies: 5.4.2, 5.4.5, 5.4.9, 5.4.11 to 5.4.13

5.3.5 To maintain or enhance public access to and along the margins of Otago’s lakes and rivers.

Explanation

Public access to and along the margins of lakes or rivers provides the opportunity for recreational use and aesthetic appreciation of Otago’s water bodies. This public access may be gained through legal access provisions or through informal arrangements. Existing public access shall be maintained or enhanced, subject to consideration of the effect on public access, and the agreement of landholders. There may be situations where it is necessary to restrict access as defined in Policy 6.5.10 of the Regional Policy Statement.

Principal reasons for adopting

This objective is adopted to provide for the management of water, and bed or margin activities consistent with Section 6(d) of the Resource Management Act and the Regional Policy Statement for Otago, which seek to maintain or enhance public access.

Policies: 5.4.6, 5.4.7, 5.4.13

5.3.6 To provide for the sustainable use and development of Otago’s water bodies, and the beds and margins of Otago’s lakes and rivers.

Explanation

The primary function of the Plan is to provide for the sustainable use, development, and protection of water bodies and the beds and margins of lakes and rivers. This objective recognises that traditionally people have made extensive use of Otago’s water resources and the ability to continue to sustainably use these resources is important.

Principal reasons for adopting

This objective is adopted to ensure continued access to Otago’s water and associated resources for a range of existing and new uses. This recognises the need for Otago’s people and communities to provide for their economic, social and cultural well being including existing use rights.

Policies: 5.4.3, 5.4.11 to 5.4.13

5.3.7 To maintain the heritage values associated with Otago’s lakes and rivers, and their margins.

Explanation

Heritage values associated with the bed or margin of a lake or river warrant being appropriately maintained. This objective applies to heritage values in Otago including those identified in Schedule 1C of this Plan, archaeological sites and sites with interim registration as historic places. Note that heritage values identified in any district plan will be given due regard in processes under this Plan.

Principal reasons for adopting

This objective is adopted to ensure that resource use and development activities do not remove or reduce opportunities for the study, enjoyment or appreciation of the significant heritage values of Otago's lakes and rivers and their margins. This reflects the importance of heritage values to the region's people and communities.

Policies: 5.4.2, 5.4.10, 5.4.13

5.3.8 To avoid the exacerbation of any natural hazard or the creation of a hazard associated with Otago's lakes and rivers.

Explanation

People and communities rely on existing standards of protection from natural hazards, such as flooding, to be maintained or enhanced. Any activity that results in a hazard such as flooding, erosion, land instability or sedimentation, or in property damage could adversely affect the health, safety and well being of people and communities. In controlling activities that could affect the behaviour of a hazard associated with lakes or rivers, it is important to prevent the exacerbation of the effects from a hazard or the creation of a hazard, on Otago's people, communities, and infrastructure, and natural and human use values.

Principal reasons for adopting

This objective is adopted to ensure that the use or development of water or water body resources does not result in new hazards, or in natural hazards leading to greater adverse effects.

Policies: 5.4.2, 5.4.13

5.4 Policies identifying and protecting natural and human use values of lakes and rivers

5.4.1 To identify the following natural and human use values supported by Otago's lakes and rivers, as expressed in Schedule 1:

- (a) Outstanding natural features and landscapes;
- (b) Areas with a high degree of naturalness;
- (c) Areas of significant indigenous vegetation, significant habitats of indigenous fauna, and significant habitats of trout and salmon;
- (d) Ecosystem values;
- (e) Water supply values;
- (f) Registered historic places; and
- (g) Spiritual and cultural beliefs, values and uses of significance to Kai Tahu.

Explanation

The above natural and human use values are identified for particular lakes and rivers, or groups of such water bodies, in the following schedules to this Plan:

- (a) Schedule 1A for values (a) to (d);
- (b) Schedule 1B for value (e);
- (c) Schedule 1C for value (f); and
- (d) Schedule 1D for value (g).

This will allow for such values to be given appropriate protection when managing activities that could adversely affect them, particularly when considering resource consents. Where further natural and human use values are identified, in addition to those identified in Schedule 1, they can still be given recognition when considering individual resource consents. Note that Policy 10.5.2 of the Regional Policy Statement for Otago provides criteria for significance regarding areas of significant indigenous vegetation and significant habitats of indigenous fauna. Other scheduled values are established to provide certainty and to meet the requirements of the Objectives and Policies in Chapter 6 of the Regional Policy Statement for Otago. These schedules are not exhaustive, but reflect the level of knowledge of particular water bodies during the Plan-making process. Where additional specific natural and human use values are identified, the schedules can be amended by way of the plan change procedure.

Principal reasons for adopting

This policy is adopted to identify specific natural and human use values supported by Otago’s lakes and rivers.

Rules: 12.1.3.1, 12.1.4.8, 12.1.5.1, 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.2.3.1, 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.2.9.1, 15.3.2.1, 15.5.1.1, 15.6.1.1, 15.9.1.1 to 15.9.1.3

5.4.2 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding, in preference to remedying or mitigating:

- (1) **Adverse effects on:**
 - (a) **Natural values identified in Schedule 1A;**
 - (b) **Water supply values identified in Schedule 1B;**
 - (c) **Registered historic places identified in Schedule 1C, or archaeological sites in, on, under or over the bed or margin of a lake or river;**
 - (d) **Spiritual and cultural beliefs, values and uses of significance to Kai Tahu identified in Schedule 1D;**
 - (e) **The natural character of any lake or river, or its margins;**
 - (f) **Amenity values supported by any water body; and**
- (2) **Causing or exacerbating flooding, erosion, land instability, sedimentation or property damage.**

Explanation

The natural and human use values of Otago's lakes and rivers can be adversely affected by the following activities:

- (a) Taking, damming and diversion of surface water;
- (b) Taking of groundwater where there is a close connection to surface water;
- (c) Discharges to water, and to land in circumstances which may result in a contaminant entering water;
- (d) Activities in, on, under or over the bed or margins of lakes or rivers.

Some activities can cause or exacerbate hazards and lessen the ability of people and communities to prevent, or protect themselves from the hazard.

When considering these activities, priority must be given to avoiding adverse effects, in preference to remedying or mitigating them, on the identified values of Otago's lakes and rivers. The opportunity to do so will arise when preparing or reviewing plans under the Resource Management Act and when considering applications for resource consents. The avoidance of adverse effects on the identified values will be sought in the first instance.

Where adverse effects are considered to be unavoidable, a resource consent may be declined or, if granted, may be subject to conditions requiring unavoidable adverse effects to be remedied or mitigated. In the case of diversion, reclamation or damming, appropriate compensation may be required as provided for by Policies 6.5.6 and 8.4.2.

With respect to heritage values covered by this policy, archaeological sites are protected under Section 10 of the Historic Places Act from being destroyed, damaged, or modified.

Principal reasons for adopting

This policy is adopted to ensure that the natural and human use values of Otago's lakes and rivers are maintained or enhanced. It is important to retain these values due to their significance to the region's communities, including Kai Tahu, and their intrinsic value. Activities that can affect water, lakes and rivers need to be managed so that any adverse effects on the values identified in this Plan are avoided, and where adverse effects are unavoidable they shall be remedied, mitigated or, in the case of diversion, reclamation or damming, appropriately compensated for. Similarly, some activities require management to ensure that the health and safety of Otago's people and communities, and natural values are not adversely affected through causing or exacerbating a hazard.

Rules: 12.1.3.1, 12.1.4.8, 12.1.5.1, 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.2.3.1, 15.2.4.1, 15.2.4.2, 15.2.5.1, 15.2.6.1 to 15.2.6.3, 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.2.9.1, 15.3.2.1, 15.3.3.1, 15.3.3.2, 15.3.4.1, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.9.1.1 to 15.9.1.4

5.4.3 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding adverse effects on:

- (a) Existing lawful uses; and**
- (b) Existing lawful priorities for the use, of lakes and rivers and their margins.**

Explanation

The existing lawful uses of Otago's lakes and rivers and their margins can be adversely affected by the following activities:

- (a) Taking, damming and diversion of surface water;
- (b) Taking of groundwater (where there is a close connection to surface water);
- (c) Discharges to water, and to land in circumstances which may result in a contaminant entering water; and
- (d) Activities in, on, under or over the bed or margins of lakes or rivers.

When considering these activities, regard must be had to avoiding adverse effects on existing lawful uses of Otago's lakes and rivers and their margins. The avoidance of adverse effects on existing lawful uses will be sought in the first instance. Where adverse effects are considered to be unavoidable, a resource consent may be declined or, if granted, be subject to conditions requiring the adverse effects be remedied or mitigated.

Recognition will also be given to the existence of existing lawful priorities for the use of water.

This policy is intended to provide a measure of protection for existing lawful use rights regarding lakes and rivers and their margins, that may be affected by any other activity under consideration. It is not intended to mean that each existing lawful use right is to be preserved unchanged, but recognises that lawfully established uses should have a reasonable expectation to continue, without being affected by new activities. The review, renewal or replacement of any existing lawful use right will be subject to the requirements of this policy, Policy 5.4.2 and other relevant objectives and policies in this Plan.

Principal reasons for adopting

This policy is adopted to ensure that existing lawful uses of Otago's lakes and rivers and their margins are recognised and that a reasonable level of ongoing security is provided. Activities that can affect the lawful uses of lakes and rivers and their margins need to be managed so that any adverse effects are avoided in preference to remedied or mitigated.

Rules: 12.1.4.2 to 12.1.5.1, 12.2.3.1A to 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.2.3.1, 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.2.9.1, 15.3.1.1, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.6.1.1, 15.7.1.1, 15.8.1.1, 15.9.1.1, 15.9.1.3, 15.9.1.4

5.4.4 To recognise Kai Tahu’s interests in Otago’s lakes and rivers by promoting opportunities for their involvement in resource consent processing.

Explanation

In terms of processes under the Resource Management Act, with respect to the use of water, this policy intends that Kai Tahu will be treated as an affected party regarding non-notified consents, and be notified of any notified resource consent application. This will allow Kai Tahu to assess the implications of each resource consent application on their spiritual and cultural beliefs, values and uses. Kai Tahu’s beliefs, values and uses, as they relate to lakes and rivers, are identified in Schedule 1D of this Plan.

Principal reasons for adopting

This policy is adopted to ensure that Kai Tahu have the opportunity to be involved in the management of activities that may adversely affect their spiritual and cultural beliefs, values and uses as they relate to lakes and rivers. Such involvement recognises the mana and kaitiaki role of Kai Tahu in respect of those lakes and rivers. The relationship of Kai Tahu with water is a matter of national importance which must be recognised and provided for under Section 6(e) of the Resource Management Act.

Rules: All rules except prohibited activity rules and permitted activity rules

Other methods: 15.2.8.3, 15.2.9.1, 15.9.1.1 to 15.9.1.4

5.4.5 To recognise the Water Conservation (Kawarau) Order 1997 by:

- (a) Preserving, as far as possible, the waters set out in Schedule 1 of the Water Conservation Order in their natural state;**
- (b) Protecting the outstanding characteristics of waters set out in Schedule 2 of the Water Conservation Order; and**
- (c) Sustaining the outstanding amenity and intrinsic values set out in Schedules 1 and 2 of the Water Conservation Order.**

Explanation

The Water Conservation (Kawarau) Order 1997 restricts or prohibits the Otago Regional Council’s functions and powers under Section 30(1)(e) and (f) (as they relate to water) to:

- (a) Retain, as far as possible, in their natural state, water bodies preserved by the Order; and
- (b) Sustain and protect the outstanding characteristics of the identified water bodies.

The values identified within the Order are included in Schedule 1A of this Plan.

Principal reasons for adopting

This policy is adopted to give effect to the Water Conservation (Kawarau) Order 1997.

Rules: 12.1.4.8, 12.1.5.1, 12.2.4.1, 12.3.1.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.2.5.1, 15.2.6.1 to 15.2.6.3, 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2

5.4.5A To recognise the Water Conservation (Mataura River) Order 1997 by ensuring that the grant or exercise of any water permit or discharge permit, in respect of any parts of the protected waters that lie within Otago, does not contravene the provisions of the Order.

Explanation

The Water Conservation (Mataura River) Order 1997 restricts or prohibits the Otago Regional Council’s functions and powers under Section 30(1)(e) and (f) (as they relate to water) to prevent:

- (a) The reduction of the rate of flow below the minimum rate of flow specified in the Order; and
- (b) The damming of protected waters, which includes the Mokoreta River and each of its tributaries, if the dam would harm salmonid fish spawning or prevent the passage of salmonid fish; and
- (c) The discharge into the protected waters if the effect of the discharge would be to breach the provisions and standards of the Order.

Values of the Mokoreta River, the upper reaches of which lie in Otago, are included in Schedule 1A of this Plan.

Principal reasons for adopting

This policy is adopted to give effect to the Water Conservation (Mataura River) Order 1997.

5.4.6 Legal public access to and along the margins of lakes and rivers will only be restricted where necessary:

- (a) **To protect areas of significant indigenous vegetation and/or significant habitats of indigenous fauna;**
- (b) **To protect Kai Tahu spiritual and cultural beliefs, values and uses;**
- (c) **To protect the health or safety of people and communities;**
- (d) **To ensure a level of security consistent with the purposes of a resource consent; or**
- (e) **In other exceptional circumstances sufficient to justify the restriction notwithstanding the national importance of maintaining that access.**

Explanation

This policy recognises that it may be necessary to restrict legal public access in certain circumstances. Legal public access provision includes legal roads, marginal strips, esplanade reserves, esplanade strips, access strips and Walkways. Existing legal public access should not be restricted unless the circumstances are exceptional and can be justified when measured against the maintenance and enhancement of public access as a matter of national importance. Exceptional circumstances may include protecting heritage values including historic places and archaeological sites.

Landholders have the right to restrict access on and across their land. Access across land is often available where the landholder has been consulted and grants permission.

Principal reasons for adopting

This policy is adopted to ensure that existing legal public access is maintained or enhanced. It also recognises that it may be necessary to restrict public access to protect values supported by the water body, to protect public health or safety or to ensure a level of security consistent with the purpose of a resource consent. The policy implements Policy 6.5.10 of the Regional Policy Statement for Otago.

Rules: 12.3.3.1, 12.3.4.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 14.3.2.1

Other methods: 15.2.3.1, 15.2.7.1, 15.2.8.1, 15.4.1.1, 15.4.2.1

5.4.7 Where existing public access to or along the margins of Otago's lakes or rivers is restricted by activities in, on, under or over the bed or margin, the provision or enhancement of alternative access:

- (a) **May be required with respect to the restriction of existing legal public access; and**
- (b) **Will be promoted with respect to the restriction of informal access arrangements.**

Explanation

Public access may unavoidably be restricted by activities in, on, under or over the bed or margin of Otago's lakes and rivers. Where legal public access is restricted under the circumstances identified in Policy 5.4.6, there may be a requirement for alternative access to be provided or enhanced, preferably in the same area, by the person responsible for restricting the public access. The provision of alternative access where informal access arrangements are compromised will also be promoted. Such arrangements are voluntarily provided by the landholder.

Principal reasons for adopting

This policy is adopted to provide for the maintenance of public access in circumstances where restriction of existing public access is unavoidable. If alternative access is provided or enhanced, the activity will result in no loss of public access to the region's water resources.

Rules: 12.3.3.1, 12.3.4.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 14.3.2.1

Other methods: 15.2.3.1, 15.2.7.1, 15.2.8.1, 15.4.1.1, 15.4.2.1

5.4.8 To have particular regard to the following features of lakes and rivers, and their margins, when considering adverse effects on their natural character:

- (a) **The topography, including the setting and bed form of the lake or river;**
- (b) **The natural flow characteristics of the river;**
- (c) **The natural water level of the lake and its fluctuation;**
- (d) **The natural water colour and clarity in the lake or river;**
- (e) **The ecology of the lake or river and its margins; and**
- (f) **The extent of use or development within the catchment, including the extent to which that use and development has influenced matters (a) to (e) above.**

Explanation

The features of lakes and rivers which can contribute to their natural character are identified above. Policy 5.4.2 gives priority to avoiding adverse effects on natural character, in accordance with Section 6(a) of the Resource Management Act. Therefore, these features will need to be taken into account when preparing plans under the Act, and when considering applications for resource consents. Lakes and rivers with a high degree of natural character can be more significantly affected by activities than those which have already been substantially modified.

Principal reasons for adopting

This policy is adopted to ensure that features contributing to the natural character of Otago's lakes and rivers are recognised. In this way, the natural character of Otago's lakes and rivers and their margins, which is enjoyed and appreciated by Otago's people and communities, can be protected from inappropriate subdivision, use and development.

Rules: 12.1.4.8, 12.1.5.1, 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.B.3.1, 12.A.2.1, 12.B.2.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.6.1.1, 15.9.1.1 to 15.9.1.4

5.4.9 To have particular regard to the following qualities or characteristics of lakes and rivers, and their margins, when considering adverse effects on amenity values:

- (a) **Aesthetic values associated with the lake or river; and**
- (b) **Recreational opportunities provided by the lake or river, or its margins.**

Explanation

The qualities and characteristics of lakes and rivers which can contribute to amenity values and their appreciation are identified above. These reflect the existing character of these water bodies, as may have been modified by resource use and development. It is also recognised that the nature of amenity values can change over time. The recreational opportunities provided by Otago's lakes and rivers and their margins can include angling for sports fish, hunting game birds and a range of other active and passive recreation.

Policy 5.4.2 gives priority to avoiding adverse effects on amenity values. Therefore these qualities and characteristics will need to be taken into account when preparing plans under the Resource Management Act and when considering applications for resource consents.

Principal reasons for adopting

This policy is adopted to ensure those elements that contribute to the amenity values of Otago's lakes and rivers and their margins are recognised. In this way, these values, which are enjoyed and appreciated by Otago's people and communities, can be protected from inappropriate use and development.

Rules: 12.1.4.8, 12.1.5.1, 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.4.1.1, 15.6.1.1, 15.9.1.1, 15.9.1.2

5.4.10 In the management of any activity involving surface water or the bed or margin of any lake or river, particular regard will be given to the heritage value of any site, building, place or area.

Explanation

Many sites, buildings, places or areas, which are valued for their links with the region's history, are associated with Otago's lakes and rivers. These values must be taken account of when considering applications for resource consents where the use or development of water resources, or the beds or margins of lakes or rivers, may adversely affect the values.

Policy 5.4.2 provides for the recognition and protection of archaeological sites and registered historic places listed in Schedule 1C. Policy 5.4.10 will give due regard to other sites of heritage value.

Principal reasons for adopting

This policy is adopted to ensure that significant heritage values on the bed or margin of a lake or river that are not archaeological sites or specifically identified on Schedule 1C, are recognised and protected from inappropriate use and development in order to achieve their maintenance in terms of Objective 5.3.7.

Rules: 12.1.5.1, 12.2.4.1, 12.3.3.1, 12.3.4.1, 12.A.2.1, 12.B.2.1, 12.B.3.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 14.3.2.1

Other methods: 15.2.7.1, 15.2.8.1, 15.2.8.3, 15.4.2.1, 15.9.1.1, 15.9.1.2

5.4.11 To provide for activities that have no more than minor adverse effects on water resources, lakes and rivers without the need for a resource consent.

Explanation

The rules chapters of this Plan identify a number of permitted activities that may occur without the need for a resource consent. Providing the permitted activity conditions are met, the activity will have no more than a minor adverse effect.

Principal reasons for adopting

This policy is adopted to avoid unnecessary regulation of activities involving water that are unlikely to result in significant adverse effects on the natural and human use values of Otago's lakes and rivers or the needs of other users.

Rules: All permitted activity rules

5.4.12 To promote the establishment of, and support, appropriate water user groups to assist in the management of water resources.

Explanation

Water user groups can assist the Otago Regional Council to manage Otago's surface and groundwater resources. In the same way that it supports landcare groups, the Otago Regional Council can support water user groups by providing hydrological and biological information, and advice on options for managing particular activities that may affect water quantity, water quality and the nature of flow and sediment processes. Such a group can provide advice to the Council, for example on the likely effects on a water body of a new take.

Principal reasons for adopting

This policy is adopted to take full advantage of local knowledge of water user needs to ensure local circumstances are taken into account in the maintenance or enhancement of natural and human use values. This will facilitate appropriate management of surface and groundwater and, where necessary, any interactions between them, and enable users to get involved in that management.

Other methods: 15.2.3.1, 15.2.8.3, 15.3.1.1, 15.3.2.1, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.7.1.1, 15.9.1.1 to 15.9.1.3

5.4.13 To encourage and support community initiatives that assist in the achievement of the maintenance or enhancement of lakes and rivers and their margins, and other water resources.

Explanation

The Otago Regional Council can assist in the achievement of the Plan's objectives by encouraging and supporting voluntary initiatives, including:

- (a) The preparation and implementation of codes of practice, management guidelines or systems developed by resource users, industry, local authorities, and other interest groups as appropriate; and
- (b) Practical mechanisms to influence the use, development or protection of lakes and rivers and their margins, and other water resources, and the effects of land-based activities on water resources, including water body

enhancement or remedial work, public access proposals or conservation measures.

Assistance may be in the form of providing appropriate information, funding, facilitating meetings and other communication, or providing works and services.

Principal reasons for adopting

This policy is adopted to encourage voluntary efforts which are often more effective at achieving appropriate management of lakes and rivers and their margins, and other water resources, than regulations. This is due to community ownership of issues and their management. Such community initiatives can help to minimise the need for regulation.

Other methods: 15.2.1.1, 15.2.2.1, 15.2.3.1, 15.2.4.2, 15.2.5.1, 15.2.6.1, 15.2.6.2, 15.2.6.3, 15.2.8.3, 15.3.1.1, 15.3.2.1, 15.3.3.1, 15.4.1.1, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.6.1.1, 15.7.1.1, 15.9.1.1 to 15.9.1.3

5.5 Anticipated environmental results

- 5.5.1 Kai Tahu spiritual and cultural beliefs, values and uses associated with water or lakes and rivers are maintained or enhanced.**
- 5.5.2 Outstanding natural features and landscapes associated with lakes and rivers are protected from inappropriate use and development of water and land resources.**
- 5.5.3 Areas of significant indigenous vegetation, significant habitats of indigenous fauna, and significant habitats of trout and salmon are protected.**
- 5.5.4 Aquatic community health and diversity in lakes and rivers are maintained or enhanced.**
- 5.5.5 People and communities can continue to access the resources of lakes and rivers and their margins.**
- 5.5.6 Significant heritage values associated with the beds or margins of lakes and rivers are protected from inappropriate use and development of water and land resources.**
- 5.5.7 The natural character of Otago’s lakes and rivers is protected from the inappropriate use and development of water and land resources.**
- 5.5.8 People and communities can continue to enjoy and appreciate the amenity values of Otago’s lakes and rivers.**
- 5.5.9 Public access to and along Otago’s lakes and rivers is maintained or enhanced.**

Monitoring of the achievement of these anticipated environmental results will be carried out as outlined in Chapter 19.

6

Water Quantity



6.1 Introduction

Water is an important resource to many of Otago's people and communities due to its use for domestic and community water supply, stock drinking water, irrigation, hydro-electric power generation and industrial supply. This chapter addresses resource use conflicts related to the quantity of water in lakes, rivers and aquifers. As activities change the quantity of water in these water bodies, the people and communities who are reliant on this water, and its life-supporting capacity, become affected.

Opportunities arise to use all available water effectively and efficiently when people within river catchments, or wider areas including underlying aquifers, work co-operatively together. Conflicts arise when demand to take, dam or divert water affects other resource consent holders, instream values, groundwater systems, and recreation and other natural and human use value needs, particularly when supplies are naturally limited. Demand may exceed supply during periods of low flow in several Otago subregions, including Central Otago, Maniototo and North Otago.

A number of Otago water bodies have water taken from them through the exercise of mining privileges (now called deemed permits). Deemed permits were granted under past mining legislation, and provided for the taking, damming and discharging of water. However, most of these takes are now used for irrigation purposes rather than for mining, and all expire on 1 October 2021. The transition to resource consents under the Resource Management Act will recognise current access to water, but will also consider the purpose of use for the water, and protection of aquatic ecosystems and natural character of the affected water bodies. Appendix 2 presents a brief discussion on deemed permits in respect of water.

This chapter, along with the relevant rules in Chapter 12, ensures that water will be managed in a sustainable manner. This is achieved through the regulation of the taking, damming or diversion of water. The chapter also promotes management of the rationing of water takes during periods of water shortage by resource users where this can be effective. This chapter applies in detail the direction given by the Regional Policy Statement for Otago to the management of activities affecting water quantity.

There is an important relationship between water quantity and quality, which is recognised in this chapter. A reduction in the quantity of water in a lake or river can affect its capacity to assimilate contaminants and can lead to higher water temperatures under low flow conditions.

The water allocation, minimum flow and aquifer provisions of this chapter are intended to provide for the maintenance of aquatic ecosystem and natural character values of water bodies, while providing for the sustainable taking of water for use. Allocation beyond those requirements must have regard to any potential adverse effects on the natural and human use values of affected water bodies, including effects arising from any loss of capacity to assimilate contaminant discharges, and any raising of water temperatures.

Aquatic ecological communities that are of importance to Otago's biodiversity may depend on the character of a particular aquifer and on how water is allocated from it. Aquifers may also support important wetlands, community water supply and economic activities.

Chapter 7: Water Quality provides for the management of contaminant discharges at source.

Note: The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes and rivers.

6.2 Issues

6.2.1 The taking of water can reduce the life-supporting capacity of aquatic ecosystems and the natural character of Otago's rivers.

Explanation

As water is taken from water bodies, lake levels and river flows may fall below that which is required to support their aquatic ecosystems and protect their natural character. As the supply of water diminishes naturally during dry periods, the demand for water increases, and this in turn increases the potential for stress on the water body and the life it supports.

Objectives: 6.3.1

Policies: 6.4.1 to 6.4.21, 6.6.1 to 6.6.3

6.2.1A The taking of water from Otago's aquifers can lead to:

- (a) Long term depletion of groundwater levels and water storage volume; and
- (b) Loss of artesian conditions; and
- (c) Short and long term depletion of surface water; and
- (d) Contamination of groundwater or surface water resources; and
- (e) Aquifer compaction.

Explanation

When groundwater is taken for consumptive use from the aquifer in quantities greater than it is being replaced by aquifer recharge, long term and potentially irreversible adverse effects can occur.

6.2.2 Use of Otago's water resources can be constrained by insufficient supply of water.

Explanation

Natural resource limits can lead to demand for water exceeding its supply. The quantity of water supplied naturally by a catchment is a function of many factors including precipitation, topography and hydrological characteristics of the catchment. Where the water supply is unable to meet the potential demand, primary and secondary industries that depend on water can be adversely affected.

Objectives: 6.3.2

Policies: 6.4.1 to 6.4.21, 6.5.2 to 6.5.5, 6.6.1 to 6.6.3

6.2.3 Opportunities for the wider use of available water resources are constrained by:

- (a) Inefficient or inappropriate practices; and**
- (b) Consent holders retaining authorisation for more water than is actually required for their purpose of use.**

Explanation

Wider use of the water is constrained by water shortages. The effects of water shortages can be exacerbated when practices are inefficient or inappropriate. For example, the following may be inefficient or inappropriate:

- (a) Water being lost from distribution systems;
- (b) Not utilising the most efficient means of taking or using the water;
- (c) Taking more water than is needed and not identifying how much water is taken;
- (d) Exporting water from water-short catchments;
- (e) Taking water on an individual basis, when there is an opportunity for taking cooperatively with regard to the wider community and environment;
- (f) Taking water from established sources, regardless of feasible alternatives;
- (g) Poorly sited, constructed and maintained bores or excavations into aquifers; and
- (h) Securing water in consents which is more than that which is needed for their purpose of use.

Transporting water from areas where water is scarce, and delivering it to locations where water is plentiful is poor management of the water resource. Excessive losses through water transportation could result in water not being available for local uses. Potential users might also find less allocation is available as a result of water being secured by existing consents, but not being used.

6.2.4 The rate, volume, timing and frequency at which water is taken can affect lawful activities.

Explanation

The rate, volume, timing and frequency at which water is taken for consumptive use by particular users, or groups of users, can compromise the use of a water body by other users. The rate and volume of taking can mean that there is less water available for those taking water downstream, or the assimilative capacity of the water body is reduced. The rate of take refers to the quantity of water taken over a certain period of time. The timing and frequency of taking can alter the extent of the adverse effect because the value of water to downstream users can vary at different times. For example, water used for the generation of hydro-electric power is generally valued most highly during mid to late autumn and winter, and it has greater value for primary production from spring to autumn than in winter. In addition, takes that individually might not have a material adverse effect on downstream users can have a cumulative adverse

effect. Where the ability of existing users to access water is adversely affected by new takes of water, potential for conflict among these users is created. There is a need to minimise any conflicts that may arise, and to ensure people and communities can continue to derive the benefits from water taken, through equitable access to water.

6.2.4A The taking of water from one bore can lower the water level in neighbouring bores.

Explanation

Takes of groundwater can adversely affect other existing groundwater takes through bore interference. Bore interference relates to the temporarily reduced ability of users in a localised area to take water due to the taking of water from another bore that reduces the pressure or the level of groundwater. The potential for interference is related to the proximity of neighbouring bores, the transmissivity within the aquifer and the rate at which water is taken from the new bore. Such interference should be minimised because of the likely conflict among users of groundwater.

6.2.5 The inter-catchment transfer of water can lead to adverse effects in the receiving catchment, due to the mixing of water.

Explanation

Water can be taken from one place to another to augment supplies and provide for growth in water demand. The transfer of water from one catchment to another, however, can result in the introduction of species to areas where they are not already present, such as trout or pest plants. The mixing of waters from different catchments may lead to a reduction in water quality in the receiving catchment, where the waters have different characteristics. This mixing is also an affront to the values of Kai Tahu because where water is sourced from another catchment (as defined by the coastal mouth) the mauri of the receiving water body is adversely affected.

Objectives: 6.3.5

Policies: 6.5.5

6.2.6 The control of flows can result in adverse effects in the river.

Explanation

The control of water flows from dams, diversions, augmentation, flood control, and other activities can have positive effects for the community, the ecology and instream values of a river. However, the activity can modify naturally variable flow regimes in terms of:

- (a) Long periods of low flow, which may adversely affect natural and human uses and other people using a river;
- (b) Long periods of high flow, which may adversely affect natural and human uses and other people using a river, and the stability of river beds and banks; and
- (c) The rates of change of flow, which may adversely affect natural and human uses of a river.

Where flows are being managed at a dam they can also affect lake levels upstream and this is addressed in Issue 6.2.7.

Objectives: 6.3.6

Policies: 6.5.4, 6.5.6

6.2.7 The management of lake levels can lead to adverse effects in the environment.

Explanation

The management of lake levels, brought about by artificial control, can change:

- (a) The form and topography of the lake and the stability of the shore and bed of a lake;
- (b) The water level of the lake and its fluctuation.

The environment surrounding lakes has developed as a consequence of, or adjusted to, the previously occurring hydrological conditions. Changes to these conditions through the control of levels may upset the existing balance between lake and lake shore environment.

Objectives: 6.3.7

Policies: 6.5.1 to 6.5.3, 8.4.2

6.2.8 Opportunities for establishing minimum flow regimes on a number of streams and rivers are constrained by mining privileges (now called deemed permits).

Explanation

Mining privileges (see Appendix 2) are an issue peculiar to Otago because of the large number that have been granted and that are still able to be used. Mining privileges are not subject to the same type of management conditions (such as the necessity to adhere to a minimum flow established under this Plan) as other water permits. For some catchments mining privileges can de-water part of some rivers during the irrigation season, which may impact on instream values.

Policies: 6.6.3

Other methods: 15.7.1.1, 15.9.1.1 to 15.9.1.3

Monitoring and Review 19.3 (8)

Appendix 2

6.3 Objectives

6.3.1 To retain flows in rivers sufficient to maintain their life-supporting capacity for aquatic ecosystems, and their natural character.

Explanation

This objective seeks to avoid the loss or degradation of aquatic ecosystems supported by rivers and the natural character of those rivers. This can be achieved by maintaining flows necessary for the life-supporting capacity for aquatic ecosystems and the natural character of those rivers. By providing for aquatic life and natural character, any adverse effects on other natural and human use values will be no more than minor.

Surface water often has a dynamic hydrological connection with groundwater, which needs to be adequately understood to ensure sustainability of these resources, which may involve more than just a single catchment.

Principal reasons for adopting

This objective is adopted in recognition of the importance of river flows in sustaining aquatic life and the natural character of Otago's rivers, and to ensure that this role continues.

Policies: 6.4.1 to 6.4.21, 6.6.1 to 6.6.3

See also: 9.4.9

6.3.2 To provide for the water needs of Otago's primary and secondary industries, and community domestic water supplies.

Explanation

The economic, social and cultural well being of Otago's people and communities relies on them securing suitable quantities of water. The present and reasonably foreseeable needs for water will therefore need to be met. This includes existing consumptive users who rely on current takes of water, as well as hydro-electric power generation and other non-consumptive users.

Principal reasons for adopting

This objective is adopted to ensure continued access for the taking of water. This recognises the importance of water in maintaining Otago's communities and their primary and secondary industries.

Policies: 6.4.1 to 6.4.21, 6.5.2 to 6.5.5, 6.6.1 to 6.6.3

6.3.2A To maintain long term groundwater levels and water storage in Otago's aquifers.

Explanation

The levels and pressures of groundwater in aquifers can be reduced where water is taken at a greater rate than it is being replaced by aquifer recharge. This objective seeks to avoid any such long term or irreversible reductions in aquifer volume through appropriate management of groundwater takes.

Groundwater often has a dynamic hydrological connection with surface water. This connection needs to be adequately understood to ensure sustainability of these water resources, which include any river, lake or wetland dependent on groundwater levels.

Principal reasons for adopting

This objective is adopted to ensure the continued availability of groundwater for existing and future users, and for natural and human use values of connected surface waters.

6.3.3 To minimise conflict among those taking water.

Explanation

The taking of water by one user can reduce the amount of water available for other users, creating or exacerbating the potential for conflict. It is important that conflict among users is minimised. This can be achieved through the consideration of the effect of new takes of water on the exercise of lawfully established takes of water and by maintaining existing priorities.

Principal reasons for adopting

This objective is adopted to ensure continued access for the taking of water. This recognises the investment that Otago's people and communities have made in resources to take and utilise water, and the need to avoid wastage of these resources.

Policies: 6.4.1 to 6.4.21, 6.6.1 to 6.6.3

6.3.4 To maximise the opportunity for diverse consumptive uses of water which is available for taking.

Explanation

It is important that the opportunity exists for people and communities to utilise water available for consumptive use. Benefits able to be derived from water taken should be as diverse as the community demands. As such, those taking water should not be unnecessarily restricted in the uses to which the water can be put.

Principal reasons for adopting

This objective is adopted to enable Otago's people and communities to benefit from the consumptive use of water that is available for taking.

Policies: 6.4.1 to 6.4.21, 6.6.1 to 6.6.3

6.3.5 To minimise adverse effects on the quality of receiving water, including its ecology and mauri, where such water is subject to any new inter-catchment transfer of water.

Explanation

Inter-catchment transfers of water can increase the supply of water available for consumptive and other uses. New transfers, however, may result in the degradation of receiving water quality, or the introduction of species to areas where they are not already present. The objective is to maintain existing conditions as far as practicable. Where new transfers mix waters from different

catchments, the objective will recognise the importance of the water body's mauri to Kai Tahu, and minimise any adverse effects on it.

Principal reasons for adopting

This objective is adopted to limit the adverse effect on any receiving catchment or its mauri caused by new transfers of water between catchments.

Policies: 6.5.5

6.3.6 To minimise any adverse downstream effect of managed flows.

Explanation

The control of water flows from activities including damming, diversion, flow augmentation and flood control has contributed to the social and economic well being of Otago's people. Modified flows downstream of such activities, however, can have adverse effects where the flows or variations in flows may not provide for the requirements of natural and human use values, existing lawful uses, or may adversely affect bed or bank stability. The passing of appropriate flows may be required to ensure that any adverse effect of the controlled flow is remedied or mitigated. The appropriateness of these flows will be determined by the nature and the flow requirements of:

- (a) Any natural and human use values that exist; and
- (b) Other uses of water that occur, downstream of the activity.

Principal reasons for adopting

This objective is adopted to ensure that the control of flows is managed to address the likely adverse effects of that control. This is because other users of water and the natural and human use values can be particularly vulnerable to prolonged low flows and to sudden changes in flow.

Policies: 6.5.4, 6.5.6

6.3.7 To minimise the adverse effects from fluctuations in the levels of controlled lakes.

Explanation

Levels in controlled lakes are subject to fluctuations due to the active management of the lake. This management is enabled through a control structure such as a dam. Fluctuating lake levels may be deemed inappropriate when, as a result of the frequency, range, and rates of change in lake levels, they lead to an adverse effect on the environment surrounding, and within, the lake.

Principal reasons for adopting

This objective is adopted to ensure that the control of lake levels is managed to address the likely adverse effects of lake level fluctuation. This is because other users of water and the natural and human use values can be particularly vulnerable to excessive drawdown and rates of change of the lake level.

Policies: 6.5.1 to 6.5.3, 8.4.2

6.4 Policies applying to the management of the taking of water

Index to policies in 6.4

Integrated water management

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6.4.11	Suspension of takes — by allocation type or aquifer level
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Integrated Water Management**6.4.0 To recognise the hydrological characteristics of Otago’s water resources, including behaviour and trends in:**

- (a) The levels and flows of surface water bodies; and**
- (b) The levels and volumes of groundwater; and**
- (c) Any interrelationships between adjoining bodies of water, when managing the taking of water.**

Explanation

The lack of uniformity in size or behaviour of lakes and rivers across Otago means they can vary from month to month, depending on climatic variability and trends in taking, thus influencing the availability of water. Aquifers have different geological characteristics which can affect the ease of water movement within them (“transmissivity”) and their inherent storage capacity (“storativity”). Most aquifers contribute water to wetlands, lakes, springs and the base flow of streams and rivers, while the flows in some rivers will support aquifer levels. Lowering groundwater levels through takes from coastal aquifers can result in seawater intruding inland.

Before the Council can allocate water for taking, or grant a resource consent, there needs to be adequate understanding of the hydrological characteristics of potential sources. This includes knowledge of river flows and groundwater levels, interactions among connected ground and surface water bodies and net outflows of freshwater from aquifers. Integrated management of Otago’s water resources requires knowledge of available water quantity from all sources.

Principal reasons for adopting

This policy is adopted to ensure an adequate understanding of the hydrological characteristics of water bodies is obtained before allocating water for taking, to avoid adverse effects on water quantity. As knowledge about the nature of the

connection among water bodies increases, there will be opportunities to incorporate local conditions within water management.

6.4.0A To ensure that the quantity of water granted to take is no more than that required for the purpose of use taking into account:

- (a) **How local climate, soil, crop or pasture type and water availability affect the quantity of water required; and**
- (b) **The efficiency of the proposed water transport, storage and application system.**

Explanation

When considering applications for resource consents to take water, the actual quantity required for the purpose of use of the water taken must be reflected in any consent granted. Reasonably foreseeable future growth, seasonal crop rotations, water storage or changes in water use may be considered. While it may not be possible to avoid all wastage of water, every effort shall be made to reduce wastage.

The consent holder may benefit from any further efficiencies gained during the life of the consent. To the extent the consent holder does not use water gained by such efficiencies, there may be instream benefits.

Principal reason for adopting

This policy is adopted to ensure that wastage is avoided when water is granted to any use under a resource consent. This will enable more people to benefit from water available for use.

6.4.0B To promote and support shared use and management of water that:

- (a) **Allows water users the flexibility to work together, with their own supply arrangements; or**
- (b) **Utilises shared water infrastructure which is fit for its purpose.**

Explanation

Shared consents to take and use water provide:

- Benefits for the water users, including making the best use of available water;
- Opportunities for shared investment in, and optimal use of, water transport and storage infrastructure;
- Economies of scale in managing use, maintaining infrastructure and meeting consent and compliance requirements;
- A reduced need for involvement in water rationing by the Council, especially during periods of low flow; and
- Overall potential for greater economic and community prosperity.

Individual consent holders may choose to work together, so that they have the flexibility to meet day-to-day requirements from available water. Such

arrangements could range from two individuals, to all water users and other interested parties within an area, working together.

Infrastructure is “fit for purpose” if it is working as it was designed to work, with no more than minor wastage of water.

Principal reasons for adopting

This policy is adopted to enable optimum benefit from the use of Otago’s limited water resources and to support the development of infrastructure that will achieve this. This policy enables management of consents for taking and use by groups of water users.

6.4.0C To promote and give preference, as between alternative sources, to the take and use of water from the nearest practicable source.

Explanation

When considering a resource consent application to take and use water, matters which the Council may consider when determining whether the applied for source of water is the nearest practicable given the proposed location of use, include:

- Whether the take and use of that water is an efficient use of the water resource.
- Whether another source of water is practically available and accessible.
- An overview of the economic, social, environmental and cultural effects of taking from the water source applied for compared to taking water from other sources.

Principal reasons for adopting

This policy promotes the management of Otago’s water resources in a way that makes water available for local use. It will assist in reducing demand in water-short areas by requiring larger water bodies with more reliable supply to be considered. This will ensure Otago’s communities can provide for their social, cultural and economic wellbeing, now and for the future.

Surface Water Takes and Connected Groundwater Takes

6.4.1 To enable the taking of surface water, by:

- (a) Defined allocation quantities; and**
- (b) Provision for water body levels and flows,**

except when:

- (i) The taking is from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha River/Mata-Au or Kawarau Rivers.**
- (ii) All of the surface water or connected groundwater taken is immediately returned to the source water body.**
- (iii) Water is being taken which has been delivered to the source water body for the purpose of that subsequent take.**

Explanation

This policy enables the taking of surface water within specified limits, and subject to suspension of takes when specified levels and flows for the water body are reached.

Primary allocation surface water takes are subject to the lowest minimum flows, supplementary allocation surface water takes are subject to higher minimum flows, and further supplementary allocation may be taken at flows greater than natural mean flow. Taking within the Plan's allocation limits and subject to the Plan's minimum flows is a restricted discretionary activity.

Allocation quantities and minimum flows set by policies in Chapter 6 do not apply to surface water takes from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha River/Mata-Au or Kawarau Rivers. They also do not apply to any take where all of the surface water or connected groundwater taken is immediately returned to the source water body. Takes from these seven water bodies and takes which are immediately returned are full discretionary activities in terms of this Plan, and rate, volume, timing and frequency, where appropriate, are addressed through objectives and policies in both Chapters 5 and 6.

Where water is delivered to a lake or river for the purpose of subsequent taking, it is not intended to have any effect on the quantities naturally present, so is excluded from allocation management under this policy. Such takes are restricted discretionary activities.

In the Waitaki catchment, all allocation must also be considered against the Waitaki Catchment Water Allocation Regional Plan (which is incorporated into policies of this Plan in Section 6.6A).

Principal reasons for adopting

This policy is adopted to enable users' access to surface water and connected groundwater while sustaining instream values.

6.4.1A A groundwater take is allocated as:

- (a) **Surface water, subject to a minimum flow, if the take is from any aquifer in Schedule 2C; or**
- (b) **Surface water, subject to a minimum flow, if the take is within 100 metres of any connected perennial surface water body; or**
- (c) **Groundwater and part surface water if the take is 100 metres or more from any connected perennial surface water body, and depletes that water body most affected by at least 5 litres per second as determined by Schedule 5A; or**
- (d) **Groundwater if (a), (b) and (c) do not apply.**

Explanation

Most aquifers share a hydrological connection with adjoining surface water bodies. The degree of connection varies in significance, and this is reflected in the four ways of managing groundwater allocations. Some aquifers are

identified on the C-series maps. Where the maps show aquifers overlapping, the Council will identify which aquifer the groundwater is to be taken from (e.g. from borelogs or water chemistry analyses).

(a) Schedule 2C
Surface water controls apply to takes from Schedule 2C aquifers because there is a close hydrological connection with the adjoining surface water bodies. These controls best manage the environmental effects of such takes.

(b) Take is within 100 metres
In some instances the degree of hydrological connection is sufficiently significant that a take of groundwater causes a depletion effect on surface water, as described in Schedule 5A. Therefore, surface water controls are imposed for groundwater takes that occur within 100 metres of a connected perennial surface water body because those takes have a direct effect on the surface water body.

(c) Take is from 100 metres or more, and depletes surface water by at least 5 litres per second.

A dual water allocation regime applies under (c) if a groundwater take produces a surface water depletion of 5 litres per second or more. This regime recognises the effect of groundwater takes by allocating the full quantity of take against the aquifer allocation. It is important that the allocation is not allocated again to another groundwater taker.

This regime also recognises the effect of surface water depletion, which can occur immediately or time delayed, by allocating a portion of the take determined using the equations set out in Schedule 5A against the surface water allocation. Therefore, the quantity of water which depletes surface water must not be allocated again to any other water take (whether of surface water or groundwater).

Surface water minimum flow restrictions are not imposed under (c) because they would not immediately alleviate low surface water flow.

(d) All other groundwater
Certain factors reduce the connection between aquifer and surface water body to a degree that surface water depletion effects are below the threshold level of 5 litres per second. These typically include:

- (i) The bed of the surface water body is impermeable; or
- (ii) The surface water body is ephemeral and only conveys water in periods of high runoff; or
- (iii) The groundwater is separated from the underlying water table by an unsaturated zone that inhibits connection to aquifer's water table; or
- (iv) The groundwater system has very low permeability; or

- (v) The groundwater system has very steep gradients or perched water tables adjacent to the surface water body boundaries; or
- (vi) The bore or well screen is sufficiently deep to avoid influence on surface water; or
- (vii) The bore or well is sufficiently distant from the surface water body to avoid influence on the surface water body.

In these instances water is allocated as groundwater only.

Principal reasons for adopting

This policy is adopted to ensure, when allocating groundwater, that the management is consistent with the management of surface water allocation, where the two resources are closely connected. The policy allows for the sustainable taking of groundwater while avoiding adverse effects, including in particular the matters listed in Policy 5.4.2 and 5.4.3.

6.4.2 To define the primary allocation limit for each catchment, from which surface water takes and connected groundwater takes may be granted, as the greater of:

- (a) That specified in Schedule 2A, but where no limit is specified in Schedule 2A, 50% of the 7-day mean annual low flow; or
- (b) The sum of consented maximum instantaneous, or consented 7-day, takes of:
 - (i) Surface water as at:
 - (1) 19 February 2005 in the Welcome Creek catchment; or
 - (2) 7 July 2000 in the Waianakarua catchment; or
 - (3) 28 February 1998 in any other catchment; and
 - (ii) Connected groundwater as at 10 April 2010, less any quantity in a consent where:
 - (1) In a catchment in Schedule 2A, the consent has a minimum flow that was set higher than that required by Schedule 2A.
 - (2) All of the water taken is immediately returned to the source water body.
 - (3) All of the water being taken had been delivered to the source water body for the purpose of that subsequent take.
 - (4) The consent has been surrendered or has expired (except for the quantity granted to the existing consent holder in a new consent).
 - (5) The consent has been cancelled (except where the quantity has been transferred to a new consent under Section 136(5)).
 - (6) The consent has lapsed.

Explanation

This policy sets a limit for primary allocation for the taking of surface water and connected groundwater (as defined by Policy 6.4.1A(a), (b) and (c)).

The consented 7-day take is calculated using the process outlined in Method 15.8.1.1. In cases where the consented maximum instantaneous take is markedly higher than the 7-day take, the consented maximum instantaneous take will be used. Once calculated by the Council the value of 50% of the 7-day mean annual low flow is fixed for a catchment.

Primary allocation is available when:

- (a) For catchments in Schedule 2A;
 - (i) If the sum of quantities consented in takes is less than the primary allocation limit set in Schedule 2A, water can be allocated as primary allocation under this policy until the Schedule 2A limit is reached; or
 - (ii) If the sum of quantities in consented takes exceeds the primary allocation limit set in Schedule 2A, no further primary allocation is available until the sum is less than the Schedule 2A limit. Primary allocation for the catchment is fully allocated, and a new quantity from within primary allocation may only be granted to a new consent subject to the surrender or expiry of an existing consent, or by transfer from an existing consent under Section 136(5). More detail is given below for when a consent is due to expire.
 - (iii) Any further allocation, known as supplementary allocation, must then be considered under Policies 6.4.9 or 6.4.10.
- (b) For catchments other than those in Schedule 2A;
 - (i) If the consented take is less than 50% of the 7-day mean annual low flow, more water can be allocated as primary allocation under this policy until that limit is reached.
 - (ii) If the sum of quantities in consented takes exceeds 50% MALF, no further primary allocation is available until the sum is less than 50% MALF. Primary allocation for the catchment is fully allocated, and a new quantity from within primary allocation may only be granted to a new consent subject to the surrender or expiry of an existing consent, or by transfer from an existing consent under Section 136(5). More detail is given below for when a consent is due to expire.
 - (iii) Any further allocation, known as supplementary allocation, must then be considered under Policies 6.4.9 or 6.4.10.

When the holder of an existing consent with primary allocation applies for a new consent for the same activity, and is able to lawfully exercise the consent beyond the consent's expiry under Section 124, that quantity of water retains its primary allocation status and may be granted to the new consent. Otherwise, if it is not replaced immediately on expiry, taking must cease when the consent expires and primary allocation status is lost. In catchments where (b) applies, that quantity is

subtracted from the sum of primary allocation consents and may not be re-allocated.

Note that where the quantity from an existing consent from within primary allocation is transferred to a new consent, calculation of the primary allocation in (b) is based on the quantity specified in the new consent.

The catchments used in terms of calculating allocation under this policy are based on the point at which each catchment enters the Clutha/Mata-Au or Kawarau main stems, Lakes Roxburgh, Dunstan, Hawea, Wanaka or Wakatipu, or the coastal marine area. An alternative upstream point may be used where practicable, having regard to the hydrological characteristics of that catchment. Allocation limits will not apply in terms of any surface water or connected groundwater take from the main stem of the Clutha/Mata-Au or Kawarau Rivers nor do the subsequent policies set minimum flows for these rivers but the provisions of Chapter 5 apply.

The Otago Regional Council will keep a record of the quantity of water allocated from each catchment, and the value of 50% of the 7-day mean annual low flow when it is fixed for a catchment.

Principal reasons for adopting

This policy is adopted, in conjunction with the application of minimum flows, for catchments identified in Schedule 2A, to provide certainty regarding the availability of water resources for taking, while ensuring the effects of takes on the life-supporting capacity for aquatic ecosystems and natural character of rivers are no more than minor. This policy also provides a conservative primary allocation for unscheduled catchments until studies can determine the appropriate allocation limits. However, these catchments are not identified in Schedule 2A, and they do not have minimum flows specified in the Plan.

This policy, along with Policies 6.4.2A and 6.4.2AA, are intended to reduce unutilised consented primary allocation over time, which will enable lowering of supplementary minimum flows.

- 6.4.2A Where an application is received to take water and Policy 6.4.2(b) applies to the catchment, to grant from within primary allocation no more water than has been taken under the existing consent in at least the preceding five years, except in the case of a registered community drinking water supply where an allowance may be made for growth that is reasonably anticipated.**

Explanation

This policy intends that in catchments where water is only available from primary allocation under a new consent for the same activity for which an existing primary allocation consent is held, only water actually taken under that existing resource consent will be considered for the new consent.

In the new consent, a consent holder may benefit from using water actually taken in the past more efficiently.

A registered community drinking water supply, in terms of this Policy, is a drinking water supply serving a community of more than 25 people for more than 60 days a year. In the case of such supplies, consent may be granted for more water than has been taken under the existing consent where there is evidence that growth is reasonably anticipated.

In all cases, the effect of seasonal extremes will be considered.

Evidence of the rate, volume, timing and frequency of water taken under the existing consent in the preceding five years is required, such as metering or measuring data. Where there is limited or no such data available, any relevant supporting evidence may be presented, for example a description of existing circumstances and use. Infrastructure present or photography showing irrigated land may also indicate how much water has been taken and when.

Principal reasons for adopting

This policy is adopted to ensure that any new consent granted reflects the pattern of taking established under the existing consent, and to minimise conflict between those taking water. This policy also intends that the taking of water is not constrained by resource consent holders who are underutilising the water allocated to them, improving efficiency of water resource use.

This policy, along with Policies 6.4.2 and 6.4.2AA, is intended to improve water resource efficiency by reducing unutilised consented primary allocation over time, which will also enable lowering of supplementary minimum flows.

6.4.2AA Where Policy 6.4.2A applies and, under the existing consent, water was usually taken at flows above the minimum flow calculated for the first supplementary allocation block for that catchment, to consider granting the new resource consent to take water as supplementary allocation.

Explanation

Some existing resource consents to take water within primary allocation are being exercised only at higher flows, as if the consents are to take water within supplementary allocation. This happens where it is not possible to take water at flows below the minimum flow for the first supplementary block for the catchment because there is no water available.

It is intended through this policy that, where a new consent is granted as supplementary allocation, the consent holder will continue to be provided with water equivalent to that taken in the past. Water taken at higher flows can be stored for later use.

Principal reasons for adopting

This policy is adopted to assist in the reduction of primary allocation by requiring consideration of the status of water infrequently taken, as supplementary allocation. This policy intends that the taking of water is not constrained by resource consent holders who are underutilising the water allocated to them, improving the efficiency of water resource use.

This policy, along with Policies 6.4.2 and 6.4.2A, are intended to reduce unutilised consented primary allocation over time, which will enable lowering of supplementary minimum flows.

6.4.3 For catchments identified in Schedule 2A, except as provided for by Policy 6.4.8, minimum flows are set for the purpose of restricting *primary allocation* takes of water.

Explanation

This policy sets specific minimum flows, as identified in Schedule 2A for specified catchments, for the taking of water that is within the primary allocation in terms of Policy 6.4.2.

The taking of primary allocation water is a restricted discretionary activity under Rules 12.1.4.2 to 12.1.4.4 provided the minimum flows in Schedule 2A are applied. Policy 6.4.6 provides an alternative to applying Schedule 2A minimum flows as a full discretionary activity under Rule 12.1.5.1. An exemption for Schedule 1B community water supply takes is provided for in Policy 6.4.8. A residual flow may be required under Policy 6.4.7 in addition to a minimum flow applied under this Policy where the take is a Schedule 1B community supply or where the take is from a tributary of a river for which a minimum flow is set in Schedule 2A.

These provisions apply where flow-monitoring facilities are in place. Schedule 2A may be amended, such as by the addition of further rivers, through plan changes as appropriate, as minimum flows are set after investigations.

Principal reasons for adopting

This policy is adopted to enable the taking of water while providing for instream values where there are monitoring facilities present and sufficient flow information available to enable the inclusion of affected rivers on Schedule 2A. The minimum flows established provide for the maintenance of aquatic ecosystems and natural character under low flow conditions. The Shag River minimum flow at Goodwood has been set for the protection of community water supply.

Rules: 12.1.4.2 to 12.1.5.1

Other methods: 15.8.2.1, 15.8.2.2

6.4.4 For existing takes outside Schedule 2A catchments, minimum flows, for the purpose of restricting *primary allocation* takes of water, will be determined after investigations have established the appropriate minimum flows in accordance with Method 15.9.1.3. The new minimum flows will be added to Schedule 2A by a plan change and subsequently will be applied to existing takes in accordance with Policy 6.4.5(d).

For new takes in a catchment outside Schedule 2A, until the minimum flow has been set by a plan change, the minimum flow conditions of any primary allocation consents will provide for the maintenance of aquatic ecosystems and the natural character of the source water body.

Explanation

This policy provides for setting of minimum flows for catchments outside Schedule 2A, for restricting the taking of water that is within the primary allocation in terms of Policy 6.4.2.

For existing takes (as defined by Rule 12.1.4.5(i)) the minimum flows will be set after investigations have determined the appropriate minimum flow and that minimum flow has been added to Schedule 2A by a plan change.

For new takes, within the primary allocation set in Policy 6.4.2(b)(i), minimum flows are to be set on a case-by-case basis recognising the water use needs of the community while providing for the aquatic ecosystems and natural character of the water bodies of the catchment. Consents will be subject to a review clause to enable the new minimum flow that is added to Schedule 2A, to be applied.

This policy combined with Policy 6.4.5(d) provides for consents that replace existing primary allocation takes to be granted without a minimum flow until a plan change establishes the minimum flow for that catchment area. Such consents will be subject to a review clause to enable the new minimum flow that is added to Schedule 2A, to be applied.

Monitoring arrangements will be made on a case-by-case basis in accordance with Method 15.8.2.2. River flows are to be measured at the catchment's discharge point, or as close as practicable upstream of that point having regard to any physical constraints. Where direct monitoring of flows is impracticable, flow recorder sites on other rivers may be used.

Schedule 1B community water supply takes within the primary allocation are exempt from these minimum flow requirements as provided for by Policy 6.4.8. A residual flow may also be applied under Policy 6.4.7.

Principal reasons for adopting

This policy is adopted to enable the taking of water from outside Schedule 2A areas while providing for the maintenance of aquatic ecosystems and natural character.

Rules: 12.1.4.2 to 12.1.5.1

Other methods: 15.8.2.1, 15.8.2.2, 15.9.1.3, 15.9.1.4

6.4.5 The minimum flows established by Policies 6.4.3, 6.4.4, 6.4.6, 6.4.9 and 6.4.10 will apply to resource consents for the taking of water, as follows:

- (a) **In the case of new takes applied for after 28 February 1998, upon granting of the consent; and**
- (b) **In the case of any resource consent to take water from within the Taieri above Paerau and between Sutton and Outram, Welcome Creek, Shag, Kakanui, Water of Leith, Lake Hayes, Waitahuna, Trotters, Waianakarua, Pomahaka, Waiwera and Lake Tuakitoto catchment areas as defined in Schedule 2A, subject to the review of**

consent conditions under Sections 128 to 132 of the Resource Management Act; and

- (c) In the case of any existing resource consent to take water from the Luggate catchment area, Manuherikia catchment area (upstream of Ophir) and the Taieri catchment areas Paerau to Waipiata, Waipiata to Tiroiti and Tiroiti to Sutton, as defined in Schedule 2A, upon collective review of consent conditions within those catchments under Sections 128 to 132 of the Resource Management Act; and**
- (d) In the case of any existing resource consent to take water within a catchment area not specified in Schedule 2A, upon the establishment of a minimum flow set for the water body by a plan change, subject to the review of consent conditions under Sections 128 to 132 of the Resource Management Act.**

Explanation

This policy provides for the application of minimum flows to consents as follows:

1. New takes are subject to minimum flow provisions when the consent is granted.
2. For resource consents to take from rivers within catchments specified in Schedule 2A, except for the Luggate, Manuherikia (upstream of Ophir) and the Taieri between Paerau and Sutton, the minimum flow provisions apply, subject to the review of consent conditions under Sections 128 to 132 of the RMA.
3. For the Luggate, Manuherikia (upstream of Ophir) and the Taieri between Paerau and Sutton, the minimum flows will not apply until after a collective review of the consents in the catchments. This will occur before 2021 if there is agreement by the holders of mining privileges (deemed permits) to adhere to the minimum flows, or on the expiry of the mining privileges on 2 October 2021. Where environmental benefit will result from applying minimum flows to any resource consents (other than deemed permits) in these catchments, the review of those resource consent conditions may also occur earlier.
4. For resource consents to take from rivers within catchments not specified in Schedule 2A, the minimum flow provisions will apply from the operative date of a plan change setting the minimum flow for the river, subject to the review of consent conditions under Sections 128 to 132 of the RMA.

Reviews under Section 128 of the Resource Management Act will be undertaken simultaneously on all reviewable takes within each catchment, in the interests of equity.

In the case of mining privileges in respect of water (deemed permits, see Appendix 2) the Resource Management Act provides for their continuation without restriction, unless compensation is made, until they expire in 2021.

However, arrangements for the conversion of such permits to resource consents may be developed before that time. Alternatively, arrangements for voluntary adherence by deemed permit holders to the minimum flows may occur. Under voluntary arrangements, or conversion of deemed permits to resource consents, or in 2021, these resource consents or deemed permits will become subject to the minimum flows established by this Plan.

The process of consent review must be completed by 2 October 2021, allowing coordination with the review of any deemed permits that may be operating in an area.

Principal reasons for adopting

This policy is adopted to enable the minimum flow provisions of the Plan to be applied as soon as practicable to existing resource consents to take water.

In the Luggate catchment area, Manuherikia catchment area (upstream of Ophir) and Taieri catchment areas between Paerau and Sutton, there is a very high proportion of mining privileges. Therefore the application of minimum flows to resource consents may be timed to coincide with their application to deemed permits (either through voluntary methods or in 2021). Where environmental benefit will result from applying minimum flows to any resource consents (other than deemed permits) in these catchments, the review of those resource consent conditions may also occur earlier.

In unscheduled catchments the minimum flows, once established and set by a plan change, will be applied to the reviewable consents in those catchments.

This will ensure that restricting water takes will result in actual environmental benefits.

Rules: 12.1.4.2 to 12.1.5.1

Other methods: 15.9.1.3, 15.9.1.4

6.4.6 To consider granting an application for a resource consent to take water from a Schedule 2A river, within primary allocation, subject to a minimum flow lower than that specified in Schedule 2A, on a case-by-case basis, provided:

- (a) The take has no measurable effect on the flow at any Schedule 2A monitoring site at flows at or below the minimum flow applying to the primary allocation; and**
- (b) Any adverse effect on any aquatic ecosystem value or natural character of the source water body is no more than minor; and**
- (c) There is no adverse effect on any lawful existing take of water.**

Explanation

This policy provides criteria for the granting of consents to take water as exceptions to the requirements of Policy 6.4.3. Such takes are full discretionary activities in terms of the rules of this Plan.

The application to take may not be granted if it has more than a minor adverse effect on any aquatic ecosystem value or on natural character, or any adverse effect on another lawful take.

Principal reasons for adopting

This policy is adopted to enable consideration of applications for the taking of water as exceptions to the requirements of Policy 6.4.3 where such a take will have no more than a minor effect.

Rules: 12.1.5.1

6.4.7 The need to maintain a residual flow at the point of take will be considered with respect to any take of water, in order to provide for the aquatic ecosystem and natural character of the source water body.

Explanation

This policy requires an assessment of whether there is any need to apply a condition on any consent to take water requiring the passing of a residual flow at the point of take. Such a residual flow condition may be applied in addition to a minimum flow applied under this Plan.

A residual flow condition may be applied to any take for community water supply purposes, or on a take from a tributary stream that has different flow characteristics from the main stem.

Residual flows will be applied and monitoring arrangements made on a case-by-case basis having regard to any effects on aquatic ecosystem values and the natural character of the source water body.

Principal reasons for adopting

This policy is adopted to enable the taking of water while providing for instream values of the source water body, particularly with respect to community water supplies and takes from tributaries that have different flow characteristics from the main stem under low flow conditions.

Rules: 12.1.3.1, 12.1.4.2 to 12.1.5.1

6.4.8 Minimum flows required by Policies 6.4.1A, 6.4.3, 6.4.4 or 6.4.6 will not apply to community water supply takes identified in Schedule 1B or 3B.

Explanation

This policy exempts scheduled community water supplies from restriction in terms of the minimum flow requirements of Policies 6.4.1A, 6.4.3, 6.4.4 and 6.4.6.

Community water supply takes beyond primary allocation will be subject to Policy 6.4.9 or 6.4.10 to maintain aquatic ecosystem values.

Principal reasons for adopting

This policy is adopted to enable continued unrestricted operation of Schedule 1B and 3B community water supplies. Human health and safety are dependent on a

reasonable supply of water and imposing minimum flows on existing takes may compromise human health and safety unnecessarily. In many instances the community has made a considerable investment in developing infrastructure to supply water, and has undertaken significant development that is dependent on the water supply.

Rules: 12.1.3.1 and 12.2.2A.1

6.4.9 To provide for supplementary allocation for the taking of water, in blocks of allocation where that is appropriate:

- (a) **Such that up to 50% of flow at the catchment main stem, minus the assessed actual take, is available for allocation subject to a minimum flow set to ensure that no less than 50% of the natural flow remains instream; or**
- (b) **On an alternative basis, provided:**
 - (i) **The take has no measurable effect on the flow at any Schedule 2 monitoring site, or any site established in terms of Policy 6.4.4, at flows at or below any minimum flow applying to primary allocation; and**
 - (ii) **Any adverse effect on any aquatic ecosystem value or natural character of the source water body is no more than minor; and**
 - (iii) **There is no adverse effect on any lawful existing take of water.**
- (c) **Supplementary allocations and associated minimum flows for some catchments are set in Schedule 2B.**

Explanation

Policy 6.4.2 provides for the taking of water as primary allocation. This policy provides for the taking of water as supplementary allocation on a 50:50 flow-sharing basis between instream and out of stream use. Fifty percent of available flow may be allocated, minus the assessed actual take, which is that volume of water in primary allocation that is actually being taken, as calculated under Method 15.8.1.1. Further supplementary allocation, where taking occurs above the river's natural mean flow, is provided through Policy 6.4.10.

In providing for supplementary allocation where there are multiple applications for new takes of water these may be granted in allocation blocks. These blocks are volumes of water, assessed as the consented maximum instantaneous rates of take. Under Method 15.8.1A.1, the size of any supplementary allocation block is based on the 7-day mean annual low flow of the catchment.

The formula for calculating the supplementary minimum flows is as follows:

$$\text{Supplementary minimum flow} = \text{Assessed actual take} + \text{Supplementary allocation}(s)$$

The 50:50 flow-sharing applies only to supplementary allocation determined under (a) of this policy. There may be a situation where the assessed actual take under part (a) is not able to be determined, due to factors including takes not

being monitored. Until such time that assessed actual take can be calculated, this policy provides for the use of primary allocation in place of assessed actual take, in terms of Method 15.8.1A.2.

The consent will be immediately subject to the minimum flow. Such supplementary allocation takes are a restricted discretionary activity.

Supplementary allocation may be made on an alternative basis, as an exception to 6.4.9(a), as long as aquatic ecosystem values, natural character and existing users downstream of the take are not adversely affected. Supplementary allocation takes that leave less than 50% of the flow instream will be considered as a full discretionary activity or, for the Waitaki Catchment only, a non-complying activity in terms of this Plan.

Schedule 2B sets blocks for supplementary allocation for some catchments.

Principal reasons for adopting

This policy is adopted to enable access to water at moderate flows, while maintaining the aquatic ecosystem and natural character values of affected rivers, and providing for natural flow variation. It also provides for a lower minimum flow to be applied, where adverse effects will be no more than minor.

6.4.10 In addition to Policy 6.4.9, to provide for further supplementary allocation without any restriction on the volume taken, where the minimum flow applied is equal to the natural mean flow.

Explanation

This policy provides for further supplementary allocation than that which is provided for by Policy 6.4.9, when flows are above the natural mean flow. At such times, water is sufficiently abundant so that taking will have no more than minor effect on instream values or other takes.

This allocation is likely to be sought by those storing water. Where such takes are subject to a minimum flow equal to the natural mean flow, limiting the allocation is unnecessary. Rule 12.1.4.7 makes such takes a restricted discretionary activity. However, further supplementary takes are full discretionary activities under Rule 12.1.5.1 because of the provision of the first supplementary allocations in Schedule 2B and the potential effects of further supplementary takes on flow variability and instream values.

Principal reasons for adopting

This policy is adopted to provide access to water at higher flows and promote water harvesting, when the maintenance of the aquatic ecosystem and natural character values of affected rivers is not an issue.

Rules: 12.1.4.7 to 12.1.5.1

Groundwater Takes**6.4.10A** *[Repealed – 1 September 2015]***6.4.10A1** Enable the taking of water allocated as groundwater by Policy 6.4.1A, by:

- (a) Determining the volume available for taking as the maximum allocation limit less the assessed maximum annual take for an aquifer calculated using Method 15.8.3.1; and
- (b) Applying aquifer restrictions where specified in Schedule 4B.

6.4.10A2 Define the maximum allocation limit for an aquifer as:

- (a) That specified in Schedule 4A; or
- (b) For aquifers not in Schedule 4A, 50% of the mean annual recharge calculated under Schedule 4D.

6.4.10A3 For any aquifer, avoid allocating beyond the maximum allocation limit, unless the water:

- (a) Is for a non-consumptive take; or
- (b) Has been previously taken under a resource consent; or
- (c) Is for a new, consumptive take of a temporary nature that is necessary for construction or repair of a structure; or
- (d) Is in a rock formation having an average hydraulic conductivity of less than 1×10^{-5} metres per second, which is not an aquifer mapped in the C-series of this Plan, and is taken in connection with mineral extraction activities.

6.4.10A4 Where an application is received to take groundwater by a person who already holds a resource consent to take that water, grant no more water than has been taken under the existing consent, in at least the preceding five years, when:

- (a) The take is from an aquifer where the assessed maximum annual take exceeds its maximum allocation limit; or
- (b) The take results in the assessed maximum annual take of an aquifer exceeding its maximum allocation limit,

except in the case of a registered community drinking water supply where an allowance may be made for growth that is reasonably anticipated.

6.4.10A5 In managing the taking of groundwater, avoid in any aquifer:

- (a) Contamination of groundwater or surface water; and
- (b) Permanent aquifer compaction.

6.4.10AA *[Repealed – 1 September 2015]***6.4.10AB** To define restrictions where needed to protect aquifer properties and water storage.

Explanation

Groundwater restriction levels can be useful for protecting an aquifer from over-depletion due to extended periods of low recharge, or in managing localised areas of high demand. They can assist in avoiding land subsidence, aquifer compression, reduced outflows to surface water, and sustaining the life supporting capacity of the aquifer. Near the coast or contaminated sites restrictions can minimise the potential for water quality effects by intrusion.

Restrictions are listed in Schedule 4B, and new aquifers may be added to the schedule using the plan change process.

Schedule 4C.2 provides detail of the matters that may be considered when setting restriction levels.

Principal reasons for adopting

This policy is adopted to enable the taking of groundwater while assisting to maintain groundwater levels and water storage, water quality, aquifer interaction with other water bodies, and avoiding aquifer compression

6.4.10AC To avoid aquifer contamination by:

- (a) **Recognising contaminated sites;**
- (b) **Identifying areas vulnerable to seawater intrusion;**
- (c) **Setting maximum allocation limits;**
- (d) **Setting aquifer restriction levels;**
- (e) **Restricting takes; and**
- (f) **Requiring monitoring of groundwater quality and levels.**

Explanation

Lowering groundwater levels through takes near contaminated sites can result in contamination spreading into the aquifer. When groundwater levels are lowered near the coast seawater can intrude inland, and where aquifers are known to be at risk they are identified as “seawater intrusion risk zones” on the C-series maps, however all groundwater takes near the coast present some risk.

The maximum allocation limit in Schedule 4A is set to reflect the water from recharge that is available for taking, while avoiding risk of contamination.

Where there is risk of aquifer contamination, a consent holder may be required to monitor groundwater quality and groundwater levels, and the rate, volume, timing and frequency of take may be restricted, to control the degree to which groundwater levels are lowered.

Principal reasons for adopting

This policy is adopted to avoid seawater intrusion into aquifers near the coast, or migration of contaminants from contaminated sites, as a result of taking groundwater. If contaminated, the aquifer’s range of uses would be restricted.

6.4.10B In managing the taking of groundwater, to have regard to avoiding adverse effects on existing groundwater takes, unless the approval of affected persons has been obtained.

Explanation

This policy recognises that the taking of groundwater from any aquifer can result in bore interference. Bore interference relates to the temporarily reduced ability of users in a localised area to take water due to the taking of water from another bore reducing the pressure or the level of groundwater. When considering the taking of groundwater, regard will be had to avoiding adverse effects on existing takes. Conditions on a resource consent to take groundwater may include limits on the instantaneous take of groundwater from the bore, in order to maintain existing access to water in neighbouring bores. Schedule 5 identifies formulae that will be applied in order to determine the acceptable level of bore interference.

Principal reasons for adopting

This policy is adopted to maintain, as far as possible, the availability of groundwater at existing bores. This will assist to avoid the potential for conflict among those taking groundwater.

6.4.10C To require appropriate siting, construction and operation of new groundwater bores, to maintain artesian pressure in confined conditions and to promote such management for existing bores.

Explanation

Bores may be located, constructed or operated in a manner that allows loss of pressure in confined artesian conditions. Confined artesian aquifer conditions occur where the pressure of water in an aquifer, beneath an impermeable or semi-permeable layer, results in water level rise above the bottom of that confining layer. Therefore, new bores must be adequately sealed to maintain artesian pressure.

The opportunity to upgrade existing bores that allow loss of artesian pressure will be taken through promotion programmes.

Principal reasons for adopting

This policy is adopted to ensure that bores are sited, constructed and operated in a manner that generally maintains pressures within an aquifer so that the aquifer can support present and future uses. It is also adopted to avoid localised adverse effects on other groundwater users.

6.4.10D To require that new bores in the Papakaio and Lower Taieri Aquifers are constructed of materials suitable to resist corrosion and in a manner that enables their complete shutdown.

Explanation

This policy establishes requirements for the construction of bores within the Papakaio and Lower Taieri Aquifers. These requirements will enable bores to have an adequate working life, minimise water quality problems associated with corrosion, and control expected artesian conditions. Construction of new bores in these aquifers will require appropriate equipment and expertise. Maps C24 and

C25 show the location of the Lower Taieri Aquifer. Maps C15 and C17 show the Papakaio Aquifer.

Principal reasons for adopting

This policy is adopted to ensure that the construction of bores within the Papakaio and Lower Taieri Aquifers is appropriate for the aquifer conditions. This will protect the supply of water from these aquifers through maintaining both the pressure and the quality of the water as it is delivered by the bore.

- 6.4.10E Unless provision has been made to permanently decommission and seal the bore, to require the structural condition and control mechanisms of all existing bores in the Papakaio and Lower Taieri Aquifers to be certified as being secure against uncontrolled artesian discharge at no more than 5 year intervals.**

Explanation

This policy establishes the need to monitor existing bores within the Papakaio and Lower Taieri Aquifers to ensure that they are in sound working order, due to pressure in the aquifer and the corrosive nature of the water. The condition of the bore is considered secure when it is able to resist corrosion and be completely shut down. Maps C24 and C25 show the location of the Lower Taieri Aquifer. Maps C15 and C17 show the Papakaio Aquifer.

Principal reasons for adopting

This policy is adopted to ensure that there is the facility to safely and effectively control the pressures experienced in the Papakaio and Lower Taieri Aquifers. Such measures will enable compliance with other requirements of this Plan.

All Water Takes

- 6.4.11 To provide for the suspension of the taking of water at the minimum flows and aquifer restriction levels set under this Plan.**

Explanation

When the flow in any river is at or below that minimum flow set by rules or consent conditions under this Plan, all takes that are subject to that minimum flow shall cease taking. This applies where there is an automatic flow recorder that can be accessed by the Council's "Water Info" telephone service. Where no access to low flow information is available directly by that telephone service, then the Council will notify resource consent holders by public notice, or other appropriate means, that taking must cease until further notice.

When the aquifer restriction levels identified in Schedule 4B have been reached, all takes that are subject to that restriction level shall cease taking. The levels are monitored from monitoring bores, identified in the Maps D1 – D4. The Council will notify those taking groundwater under consents that are subject to any restriction under this Plan, of the requirement to suspend taking when the level is at or below those identified in Schedule 4B.

The Council may, by public notice, also suspend the taking of water under permitted activity Rules 12.1.2.4, 12.1.2.5, 12.2.2.2, 12.2.2.5 and 12.2.2.6 at such times.

Principal reasons for adopting

This policy is adopted to ensure that holders of resource consents for the taking of water will cease taking water at the specified minimum flows, in order to provide for the maintenance of aquatic ecosystems and natural character under low flow conditions in Otago's rivers.

This policy also ensures the taking of groundwater will be suspended in order to protect aquifers and their recognised uses (identified in Schedule 3).

6.4.12 To promote, establish and support appropriate water allocation committees to assist in the management of water rationing and monitoring during periods of water shortage.

Explanation

Water allocation committees can assist the Council to manage the region's water resources when approaching minimum flows or aquifer restriction levels established by this Plan. These committees can effectively manage water rationing to avoid or delay reaching the minimum flow or aquifer restriction level.

The committees will be made up of local representatives of people taking water from within the catchment affected by the rationing regime. The Council will appoint such committees, as subcommittees of the Council, for the purpose of developing and managing rationing regimes. It will support them by providing hydrological information, and advice on options for rationing to suit particular circumstances, and by enforcing compliance with rationing regimes, as provided for by Policy 6.4.13. The rationing regimes require approval of the Council.

Principal reasons for adopting

This policy is adopted to ensure that effective water rationing decisions can be made. Where possible it is intended to take full advantage of local knowledge of water user needs, to ensure local circumstances are taken into account. This is because details of rationing are best arranged among water users to avoid unnecessary conflict in periods of water shortage. The committee membership and committees' rationing regimes require the approval of the Council before they can operate as committees of the Council.

6.4.12A To promote, approve and support water management groups to assist the Council in the management of water by the exercise of at least one of the following functions:

- (a) **Coordinating the take and use of water authorised by resource consent.**
- (b) **Rationing the take and use of water to comply with relevant regulatory requirements.**

- (c) **Recording and reporting information to the Council on the exercise of resource consents as required by consent conditions and other regulatory requirements, including matters requiring enforcement.**

Explanation

Formation of water management groups is voluntary. They provide flexibility for two or more consent holders to cooperate in exercising their consents, but without the added formality associated with a water allocation committee.

Appendix 2A sets out the criteria for consent holders to be approved by the Council as a water management group.

Consents may:

- Be managed to an agreed rationing regime; or
- Be held by the water management group; or
- Contain a condition requiring the consent to be exercised as directed by the water management group.

Any water rationing decisions made by the group will impact only on those consents held by the group or its members. The Council will only enforce a group rationing regime at the request of the group and if the regime has been approved by the Council.

The group may choose to apply to vary the consents under their control to allow metering and reporting requirements to be rationalised and undertaken by the group.

The Council will support water management groups by making available hydrological information and advice on options for rationing and, where no new allocation is available (i.e. where Policies 6.4.2A or 6.4.10A4 apply), by enabling the water management group to take over the allocation status of the surrendered consent.

Principal reasons for adopting

This policy is adopted to enable groups of water users to form and take on more responsibility in managing the taking and use of water. Such groups are well placed to use local knowledge of water needs, to ensure local circumstances are taken into account and to avoid unnecessary conflict in periods of water shortage.

6.4.12B To manage water rationing amongst water takes, Council may either:

- (a) **Support establishment of a water management group; or**
- (b) **Establish a water allocation committee.**

Council may also instigate its own water rationing regime or issue a water shortage direction.

6.4.12C Where appropriate, to include in water permits to take water a condition that consent holders comply with any Council approved rationing regime.

6.4.13 To restrict the taking of water in accordance with any Council approved rationing regime.

Explanation

This Policy provides for the restriction of water takes in accordance with the requirements of any Council approved rationing regime.

Rationing regimes may be proposed by water allocation committees, water management groups or the Council. A rationing regime will include:

- The area covered by the regime;
- The consents covered by the regime, which should exclude consents where the take has no effect on water availability by reason of a matching discharge immediately downstream of the point of take;
- The flow at which the regime will commence; and
- A description of how the regime will be applied.

In approving a rationing regime, Council will consider the effects of and on water takes not covered by the regime.

Where a water management group intends that rationing is to be enforced, it must be party to an approved rationing regime.

Principal reasons for adopting

This policy is adopted to enable the fair sharing of water under low flow conditions, and to assist in delaying the wider suspension of takes.

6.4.14 Other than as may be provided for by Policies 6.5.5, 8.4.2 and 10.4.2A, those taking water will not be restricted by the minimum flows set by this Plan, where the quantity taken is within any net flow augmentation specifically provided for that taking.

Explanation

This policy recognises that, where augmentation occurs, resource consents to take up to the augmentation volume may be issued, which are not subject to any minimum flow. Net flow augmentation is that water added to a water body through an augmentation scheme, for a subsequent take, which is estimated to still be present in the water body at the point of take. Quantities provided through augmentation may be reduced by leakage, or evaporation losses. Such losses will be deducted when determining the net flow augmentation that has been provided.

Other policies recognise a requirement to take water, which may have an adverse effect, but requires compensation. These policies are:

- (a) Policy 6.5.5, which requires regard to be given to avoiding specified adverse effects when augmentation involves inter-catchment transfers;
- (b) Policy 8.4.2, which recognises the need for compensation arising from the associated damming of water; and
- (c) Policy 10.4.2A, which recognises that the taking of water may affect a wetland.

Principal reasons for adopting

This policy is adopted to provide for unrestricted access by resource users to water that they themselves have provided through augmented flows. Losses are taken into account to ensure that takes that would not be subject to minimum flows would not result in minimum flows being breached.

Rules: 12.1.4.1

6.4.15 *[Repealed – 1 March 2012]*

6.4.16 **In granting resource consents to take water, or in any review of the conditions of a resource consent to take water, to require the volume and rate of take to be measured in a manner satisfactory to the Council unless it is impractical or unnecessary to do so.**

Explanation

It is appropriate to require that the volume and rate of any take of water be measured unless it is impractical or unnecessary to do so. This is the case where there may be uncertainty about the actual demand at various times and where adverse effects on the environment, or other users, could arise due to demand being either under-estimated or over-estimated. The requirement to measure takes may be waived on a case-by-case basis when considering resource consent applications to take water, where measurement is not practicable or where there is no benefit derived from doing so.

Information on volume and rate of take may also be required as a result of a catchment wide review of consent conditions undertaken in accordance with Policy 6.4.5 (b), (c) and (d), Rules 12.1.4.2 (iii), 12.1.4.3 (iii), 12.1.4.4 (iv), 12.1.4.7 (vi), 12.2.3.1A and 12.2.3.2A, and Method 15.9.1.

Principal reasons for adopting

This policy is adopted to provide for the measurement of water takes in a manner suitable to the needs of the Council and the environment. The policy will assist to identify actual demand for water, and thus may provide for more efficient allocation and use of water.

The reasons for requiring the measuring of takes as a result of a catchment wide review of consent conditions, under Policy 6.4.5 (b), (c) and (d), include:

- Better information on the volumes and rates taken will assist in establishing the influence of abstractions, if any, on the incidence and duration of minimum flows breaches, and also assist with water balance equations, allowing improved water management generally;
- Better information will assist water allocation committees to more effectively manage the rationing of takes during times of low flows to prevent minimum flows from being breached; and
- Better take information may enable supplementary allocation to be granted, ensuring instream values and flow variation are appropriately provided for and to prevent supplementary minimum flows from being breached.

6.4.17 To approve an application to transfer a consent holder’s interest in a resource consent to take and use water in terms of Section 136(2)(b)(ii) of the Resource Management Act, retaining the take’s allocation status, providing:

- (a) The transfer is within the same catchment or aquifer as the original consent, or both sites are connected in terms of Policy 6.4.1A(a) or (b); and
- (b) The total take from the water body following transfer does not exceed that occurring prior to the transfer, as a result of the transfer; and
- (c) The quantity of water taken is no more than that required for the purpose of use of that water, having regard to the local conditions; and
- (d) There is no more than minor adverse effect on any other take, any right to store water, or on any natural or human use value, as a result of the transfer.

Explanation

Section 136(2)(b) of the Resource Management Act provides for the transfer of the whole or any part of a consent holder’s interest in a consent for the taking and use of water to another person on another site, or to another site, if both sites are in the same catchment (either upstream or downstream) or aquifer. Transferring a take under this policy will not change its allocation status. A take originally in the primary allocation will be transferred as a primary allocation take, and will remain subject to the primary allocation minimum flow.

An application to transfer the consent holder’s interest in the consent must be made to the Council. This policy sets out the requirements for the transfer of consent holders’ interests in consents to take and use water to be approved by the Council. The explanation to Policy 6.4.0A provides additional guidance in terms of (c).

Principal reasons for adopting

This policy is adopted to enable new users to gain access to existing allocated resources provided the natural and human use values of Otago’s water bodies, and other water users’ interests in the water resource, are not adversely affected. Such transfers may become important where the demand on the water resource is already high. In such circumstances, transfers are a means by which opportunities for diverse consumptive use of the allocated resource can be achieved.

6.4.18 Where a resource consent for the taking of water has not been exercised for a continuous period of 2 years or more, disregarding years of seasonal extremes, the Otago Regional Council may cancel the consent.

Explanation

Where any consent for a take of water has not been exercised for a period of 2 years, the consent may be cancelled under Section 126 of the Resource Management Act. This 2 year period will not include very dry years where water

is not available to take, or very wet years when the water is not needed for the intended use of the consent.

Principal reasons for adopting

This policy is adopted to enable those wishing to use allocatable water to do so, by cancelling existing authorities to take that are not being exercised.

Rules: 12.1.3.1 to 12.1.5.1

6.4.19 When setting the duration of a resource consent to take and use water, to consider:

- (a) The duration of the purpose of use;**
- (b) The presence of a catchment minimum flow or aquifer restriction level;**
- (c) Climatic variability and consequent changes in local demand for water;**
- (d) The extent to which the risk of potentially significant, adverse effects arising from the activity may be adequately managed through review conditions;**
- (e) Conditions that allow for adaptive management of the take and use of water;**
- (f) The value of the investment in infrastructure; and**
- (g) Use of industry best practice.**

Explanation

The duration of each resource consent to take and use water should have regard to the particular circumstances of the activity and its likely environmental effects, but there needs to be good reason for Council to reduce the duration of consents from that required for the purpose of use. There can be tension between granting sufficiently long consent durations to enable continued business viability and managing the greater environmental risk associated with long duration consents.

Where more is known about a water resource, such as when a catchment minimum flow has been specified in Schedule 2B, or an aquifer restriction level has been specified in Schedule 4B, and a council approved rationing regime will be adhered to, the risk of adverse effects being unforeseen is reduced and longer duration consents may be appropriate.

Consent review provisions provide an opportunity to allow longer consent durations while ensuring the requirements of this Plan are met over time. Where there is a higher degree of risk of adverse effects, uncertainty of longer term availability of the water resource, or the applicant is unwilling to volunteer adaptive management conditions (it may be too difficult to set suitable review conditions), a shorter duration consent may be appropriate.

Adaptive management provisions may be volunteered in situations where there is uncertainty about the response required to meet future change, including rapidly changing technology or a rapidly changing environment. Such provisions

enable a proposal to proceed with sufficient, but not exhaustive, assessments of all risks and contingencies. Environmental standards initially set may be varied to be more or less restrictive over the life of the consent, in light of changing circumstances and community expectations.

Short duration consents should not be used as an alternative to declining consent, or as a response to poor assessments of environmental effects prepared by consent applicants.

Principal reasons for adopting

This policy provides greater certainty on the assessment criteria used when deciding on the duration of the consent to take and use water.

6.4.20 *[Repealed – 1 March 2012]*

6.4.21 *[Repealed – 1 March 2012]*

6.5 Policies regulating the management of lake levels, and the damming, diversion and augmentation of rivers.

6.5.1 To set a minimum level for Lake Tuakitoto of 100.77 metres above datum, applying during the period beginning 30 September in any year and ending 16 May in any following year.

Explanation

Any new resource consent for an activity that would lower the level of Lake Tuakitoto must observe the relevant minimum level established by this policy. These activities would include existing or new:

- (a) Takes of water; and
- (b) Diversions of water.

Rules 12.1.1.1 and 12.3.1.4 prohibit the taking or diversion of water when the level is below 100.77 metres above datum.

Principal reasons for adopting

This policy is adopted to continue the minimum lake level already established to protect the lake's recreational and wildlife features by The Local Water Conservation (Lake Tuakitoto) Notice, 1991.

Rules: 12.1.1.1, 12.3.1.4

6.5.2 Where lake levels are already controlled, to recognise and provide for the purpose of that control if limits are to be placed on operating levels.

Explanation

Some of Otago's lakes are controlled through the use of dams for specific purposes, storage for irrigation supply and electricity generation for example. The purposes of any existing controls are to be recognised and provided for when considering resource consents that affect lake levels. Limits on operating levels may be imposed, where necessary, in accordance with Policy 6.5.3.

Principal reasons for adopting

This policy is adopted to ensure that the purpose of controlling any lake where such control already exists is not unduly compromised. Given the investment in dams and associated structures, it would be inappropriate to prevent the use of the dammed water for the purpose for which it was dammed.

Rules: 12.3.3.1

6.5.3 To limit the operating levels of any controlled lake, where appropriate, to avoid or mitigate adverse effects on:

- (a) **Natural and human use values identified in Schedule 1;**
- (b) **The natural character of the lake;**
- (c) **The amenity values supported by the lake;**
- (d) **Lake margin stability; and**
- (e) **The needs of Otago's people and communities.**

Explanation

Changes in the levels of lakes and the rate of change can adversely affect the matters identified in (a) to (e) of the policy. It is important to consider new proposals to manage lake levels and new consents for existing dams, in order that appropriate conditions can be set to avoid or mitigate these adverse effects. These conditions will address extremes in lake levels, and the rates of change of such levels. It is also important when considering an activity affected by this policy that consideration is given to Policy 6.5.2.

Principal reasons for adopting

This policy is adopted to provide for the protection of the matters (a) to (e) above, which can be adversely affected by inappropriate lake levels and their rates of change.

Rules: 12.3.3.1

6.5.4 In regulating the management of flows, other than in association with a small dam or any dam designed to contain contaminants, to have regard to provision for:

- (a) **The requirements of:**
 - (i) **Natural and human use values identified in Schedule 1;**
 - (ii) **The natural character of the water body; and**
 - (iii) **Amenity values supported by the water body; and**
 - (b) **The periodic release of sufficient quantities of water at appropriate flow rates, where necessary to remove excess algal growth or an accumulation of sediment downstream of the dam; and**
 - (c) **The existing needs of consumptive users of water,**
- while taking into account, where appropriate, the extent to which the water body has been modified by resource use and development.**

Explanation

This policy identifies the measures that may be required in managing controlled flows, to avoid or mitigate adverse effects. Dams designed to contain contaminants, and small dams permitted by Rules 12.3.2.1 and 13.2.1.3, are excluded. Where the controlled flow conditions could lead to the river's natural and human use values, or uses of that water, being degraded or compromised, discharge flows can be modified to avoid or mitigate those effects. This may be achieved through setting maximum and minimum levels of flow, and through control of the range or rate of change of flow levels. The natural and human use values downstream of any existing dam not designed to pass water will be maintained by continuing the existing operating regime. The measures identified in the policy would be introduced upon conditions on the relevant resource consents.

Where existing development affecting the water body may have led to a stable equilibrium situation with its own natural character, this will be taken into account when invoking the provisions of this policy.

Principal reasons for adopting

This policy is adopted to ensure that the natural and human use values supported by water bodies are sustained. The measures identified will provide for adequate water and appropriate flow variation for the existing values and uses.

Rules: 12.3.3.1, 12.3.4.1, 12.B.3.1, 14.3.2.1

6.5.5 In considering resource consents for flow augmentation proposals involving any transfer of water between catchments that was not lawfully established before 28 February 1998, regard will be had to avoiding:

- (a) **The introduction of flora or fauna which are not already present;**
- (b) **The reduction of water quality in the receiving catchment; and**
- (c) **Adverse effects on Kai Tahu cultural and spiritual beliefs, values and uses.**

Explanation

Augmentation of surface water flows for the purposes of this policy occurs where water is brought into a catchment for subsequent release. When considering any relevant resource consents required for new augmentation schemes, regard must be had to avoiding the adverse effects identified in this policy.

Principal reasons for adopting

This policy is adopted to ensure that new proposals for the augmentation of water resources do not lead to adverse effects on the flora and fauna, water quality, or cultural and spiritual beliefs, values or uses of the water resources.

Rules: 12.3.3.1, 12.3.4.1.

6.5.6 Financial contributions, or works or services may be required to offset, remedy or mitigate any unavoidable adverse effect of the diversion of water on:

- (a) Any natural or human use value identified in Schedule 1;
- (b) The natural character of the water body;
- (c) Any amenity value supported by the water body; or
- (d) Any heritage value associated with any affected water body.

Explanation

The diversion of water can result in unavoidable adverse effects on the natural and human use values supported by the water body. Where such effects occur, financial contributions, or works or services may be required as a condition of a resource consent to offset, remedy or mitigate the effects. The amount and type of financial contribution, or the type of work or service, will depend on the nature of the activity and will relate to the adverse effects on the natural and human use values. Financial contributions are detailed in Chapter 17 of this Plan.

Principal reasons for adopting

This policy is adopted to ensure provision is made to either offset, remedy or mitigate any unavoidable adverse effect of the diversion of water.

Rules: 12.3.3.1, 12.3.4.1

See also: Chapter 17; Policies 8.4.2, 10.4.2A

6.6 Policies for the promotion of management of water resources by users

6.6.0 To promote and support development of shared water infrastructure.

Explanation

Water infrastructure includes the physical systems used to take, store, distribute and use water. While individual systems may work well in some situations, there are many areas throughout Otago where shared water infrastructure is required, including urban water supplies, community domestic supplies, industrial and commercial users and multi-property irrigation supplies.

There are also opportunities to rationalise water supply, to store surface water, to distribute water more efficiently, to better integrate use of available water sources and to develop new water supply systems where community investment in water infrastructure will provide the best return on investment.

For its part, the Council will provide information about the water resources and help facilitate responses to local water needs. The Council will collaborate with the community and others in scoping strategic options for development of new infrastructure, where necessary.

Principal reasons for adopting

This policy is adopted to ensure future investments in water infrastructure achieve sustainable management of the region's water resources.

6.6.1 To promote water conservation practices through:

- (a) Promoting water use practices which minimise losses of water; and
- (b) Promoting water use practices which require less water.

Explanation

The Otago Regional Council will promote voluntary action by agricultural, industrial and domestic water users, to minimise the amount used for any particular purpose. This policy identifies the areas which can be targeted to achieve this outcome. The Council will provide appropriate information to assist water users to identify opportunities to use water more efficiently.

Principal reasons for adopting

This policy is adopted to achieve more efficient use of the water resource and thereby increase the available supplies for existing and potential users within the constraints of minimum flows established by this Plan.

Other methods: 15.2.1.1, 15.2.3.1, 15.3.1.1, 15.4.2.1

6.6.2 To promote the storage of water at periods of high water availability through:

- (a) The collection and storage of rainwater; and
- (b) The use of reservoirs for holding water that has been taken from any lake or river.

Explanation

The Otago Regional Council will promote voluntary storage of water by resource users. This policy identifies the means by which storage is encouraged. Water used to fill storage is collected during periods of high flow, for subsequent use in periods when demand exceeds supply.

Principal reasons for adopting

This policy is adopted to give recognition to water storage as a way to achieve more efficient use of the water resource. Storage may reduce the need to take water from lakes or rivers when available supplies are limited and the potential for adverse effects of taking is greatest.

Other methods: 15.2.3.1, 15.3.1.1

- 6.6.3 To work with and seek the co-operation of holders of deemed permits in:**
- (a) The observance of any minimum flows or levels applying to other users;**
 - (b) Ensuring that the quantity of water taken is no more than that required for the intended use of that water, in accordance with Policy 6.4.15; and**
 - (c) The measuring of takes and return flows.**

Explanation

Deemed permits (see Appendix 2) have become a significant element of Otago’s water management regime and confer significant benefits upon the region’s people and communities. This policy establishes means to assist in the development of methods and strategies for the orderly transition from deemed permits, which expire in 2021, to resource consents. The means in (a) to (c) of the policy are intended to introduce equity in the implementation of minimum flows, remove excessive allocation and provide resource use information. There will be consultation with users to ensure that no arbitrary changes are required. Where voluntary methods fail the Council may consider using other options.

Principal reasons for adopting

This policy is adopted to support a possible transition from deemed permits to resource consents. This transition may be needed because the exercise of deemed permits can constrain opportunities to implement minimum flows established by this Plan to maintain the life-supporting capacity for aquatic ecosystems and natural character of rivers.

Seeking the co-operation of holders of deemed permits is an effective means of developing more appropriate provisions for management of water in the long term.

Other methods: 15.7.1.1 and 15.9.1

6.6A Policies relating to the Waitaki catchment

Policy on a whole-catchment approach

- 6.6A.1 By recognising the importance of connectedness between all parts of the catchment from the mountains to the sea and between all parts of freshwater systems of the Waitaki River and associated beds, banks, margins, tributaries, islands, lakes, wetlands and aquifers.**

Explanation

The Waitaki catchment is large and complex. This policy recognises the importance of taking a whole-catchment “mountains to the sea” approach to water allocation in the catchment – an approach that recognises the physical, ecological, cultural and social connections throughout the catchment.

*Policies on the allocation to activities***6.6A.2 In considering effects and when allocating to activities under the provisions of this Plan:**

- (a) Tāngata whenua values are those held by Kāi Tahu;
- (b) National effects refer to those that arise within New Zealand; and
- (c) Local effects refer to those that arise in the Mackenzie District, the Waimate District and the Waitaki District.

Explanation

This policy presents the scope of effects as they apply to this Plan. Part (a) reflects the Ngāi Tahu Claims Settlement Act 1998 which recognises the mana of Kāi Tahu in relation to a range of sites and areas in the South Island. Effects are considered from both national and local perspectives. It is recognised that local social and economic effects are likely to extend beyond the catchment boundary, and will vary unevenly with distance, depending on the circumstances of each case. For the purpose of this Plan however, it is necessary to define the scope of local effects considered in order to define the basis of assessment, and this is provided in part (c) of this policy.

6.6A.3 To establish an allocation to each of the following activities:

- (a) Town and community water supplies;
- (b) Hydro-electricity generation;
- (c) Agricultural and horticultural activities;
- (d) Industrial and commercial activities;
- (e) Tourism and recreation facilities; and
- (f) Any other activities,

by:

- (i) Having regard to the likely national and local effects of those activities;
- (ii) Reference to relevant national, regional and local plans and strategies;
- (iii) Recognising the importance of irrigation to agriculture and horticulture;
- (iv) Considering the relative environmental effects of the activities including effects on landscape, water quality, mauri, and the beds of lakes and rivers;
- (v) Assuming a high level of efficacy and technical efficiency;
- (vi) Giving a preference to needs for water within the catchment; and
- (vii) Expressing the allocation to activities in annual volumes downstream of Waitaki Dam but downstream of Black Point.

Explanation

One of the requirements of the Resource Management (Waitaki Catchment) Amendment Act 2004 is that this Plan must provide for the allocation of water to activities. Policy 6.6A.3 contains the categories of activities and describes the approach used to make allocations among the activities. These allocations apply, at the point that water is taken, to new and replacement consents from all water bodies including canals, and will require all consents to specify an annual volume. Policy 6.6A.2 provides further description of how the local and national effects are defined. Any activity that falls outside the allocations set under this policy in the rules will be a non-complying activity and must demonstrate the effect of granting the consent on the entitlements to other allocations over the timeframe of the consent. Applications for resource consents are still required for taking or diverting water within the allocation volumes. They are subject to the other provisions of this Plan, and to the consideration of effects under the resource consent processes.

Rules: 12.1.4.5, 12.1.4.6, 12.1.4.7, 12.1.4.8, 12.1.1A.2, 12.1.1A.3, 12.2.4.1, 12.2.1A.2, 12.3.3.1, 12.3.4.1, 12.3.1A.2, 12.3.1A.3

Other methods: 15.2.1.1, 15.2.3.1, 15.3.1.1

- 6.6A.4 In considering whether to grant or refuse consent to take, divert, dam or use water allocated for agricultural and horticultural activities, the consent authority will have regard to the extent to which exercise of the consent could result in the water quality objectives in this Plan not being achieved.**

Explanation

This policy recognises the importance of water quality considerations when allocating water to agricultural and horticultural activities and, in particular, to irrigation. The intensification of land use, including that arising from irrigation, increases the potential for adverse effects on water quality. The Waitaki catchment has some sensitive and pristine water bodies that have not to date had intensive land uses in their catchments. This policy links to the water quality chapter to ensure these matters are considered when deciding consents.

Objectives: 7.A.1, 7.A.2, 7.A.3

Rules: 12.1.4.5, 12.1.4.6, 12.1.4.7, 12.1.4.8, 12.1.1A.2, 12.1.1A.3, 12.2.4.1, 12.2.1A.2, 12.3.3.1, 12.3.4.1, 12.3.1A.2, 12.3.1A.3

Other methods: 15.2.3.1, 15.4.2.1, 15.4.2.2

- 6.6A.5 In considering whether to grant or refuse consents to take, divert or use water outside of the Waitaki catchment, the consent authority will have regard to the extent to which granting consent will reduce the availability of water to current and reasonably foreseeable in-catchment needs.**

Explanation

In parts of the catchment there is insufficient water to reliably meet all current and future demands. This policy places a primacy on demands for water within the catchment by providing for in-catchment needs for water to be considered before a consent authority decides whether or not to grant applications to take water out of the catchment. The policy does not preclude the grant of applications

for out-of-catchment use, but provides for consideration of likely in-catchment needs when considering such applications. Policy 6.5.5, concerning the adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses, including mauri, may also be relevant to the consideration of such applications.

Policy: 6.6.5

Rules: 12.1.4.5, 12.1.4.6, 12.1.4.7, 12.1.4.8, 12.1.1A.2, 12.1.1A.3, 12.2.4.1, 12.2.1A.2, 12.3.3.1, 12.3.4.1, 12.3.1A.2, 12.3.1A.3

Other method: 15.2.3.1

Policy for Welcome Creek

6.6A.6 By setting an environmental flow and level regime in Welcome Creek that recognises and provides for the relationship of Kāi Tahu and their culture and traditions with Welcome Creek, and enables appropriate access to water for activities identified in Policy 6.6A.3 to the extent consistent with the objective in this Plan.

Explanation

This policy sets the basis for the environmental flow and level regime for this creek which are set in the rules. It identifies particularly important values that were considered in setting the regime.

Policy 6.6A.3

Rules: 12.1.4.7, 12.1.4.8, 12.1.1A.3, 12.3.1A.3

Other method: 15.2.3.1

6.7 Anticipated environmental results

- 6.7.1 There is sufficient water remaining to support the life-supporting capacity and natural character of rivers.**
- 6.7.2 People and communities have access to suitable supplies of water for their present and reasonably foreseeable needs.**
- 6.7.3 Inter-catchment transfers of water do not result in the introduction of new flora or fauna.**
- 6.7.4 The levels of controlled lakes are managed as far as practicable to be compatible with the surrounding environment.**
- 6.7.5 Flows and flow variation downstream of dam structures provide for the requirements of other users of water, and the natural and human use values.**
- 6.7.6 More efficient water taking and use practices are utilised.**
- 6.7.7 Maximum community benefit is gained from available surface water resources and security of reasonable lawful access is provided for.**

6.7.8 Conflict among those taking water is minimised.

Monitoring of the achievement of these anticipated environmental results will be carried out as outlined in Chapter 19.

7

Water Quality



7.1 Introduction

The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes, and rivers and wetlands; and those included in Chapter 9, which contain policies on groundwater quality.

7.2 Issues in general *[Repealed – 1 May 2014]*

7.3 Issues related to point source discharges to water *[Repealed – 1 May 2014]*

7.4 Issues related to non-point source discharges to water *[Repealed – 1 May 2014]*

7.5 Objective *[Repealed – 1 May 2014]*

7.A Objectives

7.A.1 To maintain water quality in Otago lakes, rivers, wetlands, and groundwater, but enhance water quality where it is degraded.

7.A.2 To enable the discharge of water or contaminants to water or land, in a way that maintains water quality and supports natural and human use values, including Kāi Tahu values.

7.A.3 To have individuals and communities manage their discharges to reduce adverse effects, including cumulative effects, on water quality.

7.B Policies general

7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by:

- (a) Describing, in Table 15.1 of Schedule 15, characteristics indicative of good quality water; and**
- (b) Setting, in Table 15.2 of Schedule 15, receiving water numerical limits and targets for achieving good quality water; and**
- (c) Maintaining, from the dates specified in Schedule 15, good quality water; and**
- (d) Enhancing water quality where it does not meet Schedule 15 limits, to meet those limits by the date specified in the Schedule; and**
- (e) Recognising the differences in the effects and management of point and non-point source discharges; and**
- (f) Recognising discharge effects on groundwater; and**

- (g) **Promoting the discharge of contaminants to land in preference to water.**

- 7.B.2 Avoid objectionable discharges of water or contaminants to maintain the natural and human use values, including Kāi Tahu values, of Otago lakes, rivers, wetlands, groundwater and open drains and water races that join them.**

- 7.B.3 Allow discharges of water or contaminants to Otago lakes, rivers, wetlands and groundwater that have minor effects or that are short-term discharges with short-term adverse effects.**

- 7.B.4 When considering any discharge of water or contaminants to land, have regard to:**
 - (a) **The ability of the land to assimilate the water or contaminants; and**
 - (b) **Any potential soil contamination; and**
 - (c) **Any potential land instability; and**
 - (d) **Any potential adverse effects on water quality; and**
 - (e) **Any potential adverse effects on use of any proximate coastal marine area for contact recreation and seafood gathering.**

- 7.B.5 When considering any discharge of water from one catchment to water in another catchment, have regard to:**
 - (a) **Kāi Tahu values; and**
 - (b) **The adverse effects of introducing species that are new to the receiving catchment.**

- 7.B.6 When assessing any consent to discharge contaminants to water, consider the need for and the extent of any zone for physical mixing, within which water will not meet the characteristics and limits described in Schedule 15, by taking account of:**
 - (a) **The sensitivity of the receiving environment; and**
 - (b) **The natural and human use values, including Kāi Tahu values; and**
 - (c) **The natural character of the water body; and**
 - (d) **The amenity values supported by the water body; and**
 - (e) **The physical processes acting on the area of discharge; and**
 - (f) **The particular discharge, including contaminant type, concentration and volume; and**
 - (g) **The provision of cost-effective community infrastructure; and**
 - (h) **Good quality water as described in Schedule 15.**

- 7.B.7 Encourage land management practices that reduce the adverse effects of water or contaminants discharged into water.**

7.B.8 Encourage adaptive management and innovation that reduces the level of contaminants in discharges.

7.C Policies for discharges of human sewage, hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams

7.C.1 When considering applications for resource consents to discharge contaminants to water, to have regard to opportunities to enhance the existing water quality of the receiving water body at any location for which the existing water quality can be considered degraded in terms of its capacity to support its natural and human use values.

Explanation

There is the opportunity, particularly with new resource consents for existing discharges, to achieve an enhancement in water quality. This can occur when the consent holder re-examines the discharge activity and makes use of technological advances in the reduction, reuse, recycling, or treatment of contaminants. The Otago Regional Council will have regard to these opportunities when considering resource consents to discharge contaminants to water.

This policy applies to any location for which the existing water quality can be considered degraded in terms of its capacity to support its natural and human use values.

Principal reasons for adopting

This policy is adopted to ensure that opportunities are taken to achieve improved water quality in Otago’s lakes and rivers. The policy reflects the importance of enhancing water quality to the region’s people and communities.

Rules: 12.A.2.1, 12.B.2.1, 12.B.3.1.

7.C.2 When considering applications for resource consents to discharge contaminants to water, or onto or into land in circumstances which may result in any contaminant entering water, to have regard to:

- (a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects;**
- (b) The financial implications, and the effects on the environment of the proposed method of discharge when compared with alternative means; and**
- (c) The current state of technical knowledge and the likelihood that the proposed method of discharge can be successfully applied.**

Explanation

When considering the avoidance, remedy or mitigation of the adverse effects of the discharge of contaminants to land or water under a resource consent, the Otago Regional Council will consider matters identified in (a) to (c) in the policy. This ensures the recognition of any financial or technical constraint upon the

adoption of alternative treatment or discharge methods, given the sensitivity of the receiving environment to the discharge.

Principal reasons for adopting

This policy is adopted to ensure that consideration is given to appropriate means for avoiding, remedying or mitigating the adverse effects of contaminants on water or land, to enable the most environmentally sound means to be adopted.

Rules: 12.A.2.1, 12.B.2.1, 12.B.3.1.

7.C.3 When considering any resource consent to discharge a contaminant to water, to have regard to any relevant standards and guidelines in imposing conditions on the discharge consent.

Explanation

The primary concern for the Otago Regional Council, in considering resource consents, is protecting the natural and human use values supported by water bodies. Guidelines applicable to Otago may assist in this task in terms of the development of resource consent conditions controlling the effects of any particular contaminant in the receiving waters.

This Plan does not set generic numerical standards for particular contaminants. Instead the Plan identifies specific natural and human use values and, prior to granting a discharge consent, Council must be satisfied that those values will not be compromised. Guidelines will be used when applicable to the type of discharge and the nature of the receiving environment. These will be considered on a case by case basis.

Principal reasons for adopting

This policy is adopted to signal that standards and guidelines will be used as appropriate in imposing conditions on discharge consents in order to achieve the Plan's objectives. The application of standards will provide certainty to the person proposing to undertake the discharge as to the requirements for avoiding, remedying or mitigating adverse effects on the natural and human use values supported by the receiving water body.

Rules: 12.A.2.1, 12.B.2.1, 12.B.3.1.

7.C.4 The duration of any new resource consent for an existing discharge of contaminants will take account of the anticipated adverse effects of the discharge on any natural and human use value supported by an affected water body, and:

- (a) **Will be up to 35 years where the discharge will meet the water quality standard required to support that value for the duration of the resource consent;**
- (b) **Will be no more than 15 years where the discharge does not meet the water quality standard required to support that value but will progressively meet that standard within the duration of the resource consent;**

- (c) **Will be no more than 5 years where the discharge does not meet the water quality standard required to support that value; and**
- (d) **No resource consent, subsequent to one issued under (c), will be issued if the discharge still does not meet the water quality standard required to support that value.**

Explanation

Resource consents to discharge contaminants may be issued for up to 35 years under the Resource Management Act. The duration of new resource consents for existing discharges under this Plan will be set having regard to the effect of the discharge on the natural and human use values supported by any affected water body, in accordance with (a) to (d) of this policy.

The maximum duration of any resource consent will be 35 years. Where the discharge is adversely affecting any natural and human use value that the water body supports, the duration will be less. This encourages the resource consent holder to investigate alternatives, that will improve the discharge, in order to meet the standards required to support the natural and human use value.

In recognition of financial and technical constraints on those proposing to undertake the discharge, a short duration resource consent, which does not exceed 5 years, may be granted in accordance with (c), in which time they must comply with the relevant water quality standards. Discharges that do not comply by the time the resource consent has expired will not be granted a further resource consent for the discharge. Another option is to make a commitment to meet the water quality standard required to support the affected value progressively within the duration of the resource consent. The duration of such resource consents would not exceed 15 years, in accordance with (b).

Principal reasons for adopting

This policy is adopted to give guidance for determining the appropriate duration of any resource consent to continue discharging contaminants. It will enable proper consideration of changes over time in the receiving environment, and to encourage, within technical and financial constraints, a reduction in the adverse effects of point source discharges on Otago's water bodies. This will assist in achieving the maintenance or enhancement of existing water quality.

Rules: 12.A.2.1, 12.B.2.1, 12.B.3.1.

7.C5

Part A:
Discharge
policies

Minimise the adverse environmental effects of discharges ~~With respect to discharges~~ from any new stormwater reticulation system, or any extension to an existing stormwater reticulation system, ~~to require:~~ by requiring:

- (a) **The separation of sewage and stormwater; and**
- (b) **Measures to prevent contamination of the receiving environment by industrial or trade waste; and**
- (c) **The use of techniques to trap debris, sediments and nutrients present in runoff.**

Explanation

In terms of the Plan's rules for permitted and discretionary activities for new discharges, or extensions to the catchment area of existing discharges from reticulated stormwater systems, the requirements of (a) to (c) will apply, as required.

Principal reasons for adopting

This policy is adopted to reduce the potential for contaminants to be present in new stormwater discharges. This is intended to mitigate the impact on the water quality of receiving water bodies in urbanised areas or other areas served by a stormwater reticulation system.

Rules: 12.B.3.1

Other methods: 15.2.5.1, 15.4.2.1, 15.4.2.2.

7.C.6 Reduce the adverse environmental effects from existing stormwater reticulation systems by:

Part A:
Discharge
policies

- (a) Requiring the progressive upgrade of stormwater reticulation systems to minimise the volume of sewage entering the system and the frequency and volume of sewage overflows; and
- (b) ~~To promote~~ Promoting the progressive upgrading of the quality of water discharged from existing stormwater reticulation systems, including through:
 - (i) The separation of sewage and stormwater; and
 - (ii) Measures to prevent contamination of the receiving environment by industrial or trade waste; and
 - (iii) The use of techniques to trap debris, sediments and nutrients present in runoff.

Explanation

The Otago Regional Council will ~~encourage~~ require the operator of any existing stormwater reticulation system to improve the quality of stormwater discharged from the system. ~~Measures that can be taken to achieve this improvement include:~~

- ~~(a) The separation of sewage and stormwater;~~
- ~~(b) Measures to prevent contamination of the receiving environment by industrial or trade waste; and~~
- ~~(c) The use of techniques to trap debris, sediments and nutrients present in runoff.~~

Priority will be given to improving discharges to those water bodies where natural and human use values are adversely affected. Such measures may not be necessary where an existing discharge is having no more than a minor adverse effect on any natural or human use value supported by an affected water body.

Principal reasons for adopting

This policy is adopted to reduce the level of contaminants present in existing stormwater discharges. This is intended to mitigate the impact on the water

quality of receiving water bodies in urbanised areas or other areas served by a stormwater reticulation system.

Rules: 12.B.3.1

Other methods: 15.2.5.1, 15.4.2.1, 15.4.2.2.

- 7.C.7 To require that all practical alternative locations for the storage of hazardous substances have been considered before such storage occurs in close proximity to any lake or river or to mean high water springs; and, if it is not practical to locate elsewhere, to require that appropriate risk management contingencies are put in place.**

Explanation

Although the use of hazardous substances may provide benefits to the community, the storage of such substances close to surface water also represents a risk of contamination through spillage or leakage. Any person intending to store hazardous substances in close proximity to any lake or river, or to mean high water springs, will require land use consent from the relevant city or district council. The district plan rules of those councils will specify the land to which the above requirements will apply.

When considering the location of new facilities for the storage of hazardous substances in close proximity to any lake, river or mean high water springs, the applicant should demonstrate that there are no other, more suitable, less sensitive locations available. If a less sensitive location is not practical, then appropriate design, construction and management practices must be established to minimise the risk of any hazardous substance entering water. For existing facilities where it would be unreasonable to require relocation, appropriate spill containment measures must be established to ensure the lake, river or coastal environment is safeguarded.

Principal reasons for adopting

This policy is adopted to avoid the discharge into water where hazardous substances are inappropriately stored. There is an increased likelihood of such contamination where the storage occurs in close proximity to surface water bodies. Such discharges will adversely affect water quality and the ability of the water body to support natural and human use values.

Other methods: 15.2.7.1, 15.4.2.2

- 7.C.8 To promote the use of contingency plans for the prevention, containment and recovery of the accidental spill of any hazardous substance which may adversely affect water quality.**

Explanation

In the development or modification of any industrial, commercial or agricultural facility where there is potential for the spillage of substances which could

contaminate water, the Otago Regional Council will promote the adoption of a spills contingency plan. Such plans will involve four key elements:

- (a) Appropriate handling procedures will be encouraged to avoid accidental spills;
- (b) Mechanisms, such as bunding, will be encouraged to contain spills;
- (c) Appropriate clean-up and dispersal actions will be identified to remedy the effects where containment is not achieved; and
- (d) Proactive education.

The use of contingency plans will be promoted to city and district councils, industry groups, and the developers or owners of the identified facilities.

Principal reasons for adopting

This policy is adopted to reduce the incidence and severity of accidental spills of contaminants into, upstream of, or adjacent to, any water. This is important as such spills may undermine all previous efforts to maintain or enhance water quality.

Other methods: 15.2.4.1, 15.2.7.1, 15.3.4.1, 15.4.2.2, 15.5.1.1.

7.C.9 To support the coordination of measures to remedy or mitigate the adverse effects associated with accidental spills which could potentially contaminate water.

Explanation

The accidental spill of any contaminant that may adversely affect water quality will be remedied or mitigated by the clean-up and dispersal of the spilled contaminant. City and district councils, the Fire Service and others may be involved in spill clean-up operations. The Otago Regional Council will support the coordination of the appropriate response to any accidental spill through the provision of advice on possible disposal or treatment options.

Principal reasons for adopting

This policy is adopted to ensure the appropriate agencies become involved in clean-up operations in the event of a spill of contaminants and that the clean-up operations themselves do not lead to the contamination of water.

Other methods: 15.2.4.1, 15.2.7.1, 15.3.4.1, 15.4.2.2, 15.5.1.1.

7.C.10 Except in the case of a dam constructed to store contaminants, to avoid the damming or diversion of water over contaminated land where it would result in contamination of water or, where avoidance is not practicable, to require the removal or treatment of the contaminated land.

Explanation

There is the potential for adverse effects on water quality where land contaminated by hazardous substances comes into contact with water. Such effects may occur:

- (a) Within a reservoir created by the damming of a water body;
- (b) Within diverted water where the water passes over contaminated land; or

- (c) Downstream of that reservoir or diverted water.

When considering any resource consent for new proposals for damming or diversion of water, the Otago Regional Council must be satisfied that the activity would not result in water being contaminated by its coming into contact with contaminated land. The Council maintains a register of contaminated sites in Otago.

One practical method of managing potential adverse effects from contaminants in a dam constructed to store contaminants, such as a mine tailings dam, is to immerse the contaminants beneath water in a controlled environment. This policy therefore does not apply and Policy 7.C.11 provides for such activities.

Principal reasons for adopting

This policy is adopted to prevent degradation of water quality caused by contaminated land coming into contact with water as a result of the damming or diversion of water. Mining tailings dams are exempt from this policy because that activity sometimes needs to immerse contaminants under water as one practicable method of managing potential adverse effects.

Rules: 12.3.4.1

7.C.11 To require the holder of any consent for a dam constructed for the storage of contaminants to completely remedy any adverse effect of the failure or overtopping of the dam structure, either during or after its construction.

Explanation

Where a resource consent is required for either:

- (a) the damming of water; or
- (b) the storage of hazardous substances,

for the purpose of establishing a tailings dam, the consent authority will require the person erecting the dam to plan for and provide measures, including bonds under Section 108 of the Resource Management Act, for the complete remediation of any loss or damage caused by the uncontrolled release of contaminants. There is a risk of such releases where the tailings dam constructed to store the contaminants fails or is overtopped, either during or after its construction.

Principal reasons for adopting

This policy is adopted to provide for the complete remediation of adverse effects arising from the failure or overtopping of a tailings dam.

Rules: 13.2.3.1, 13.3.2.1

Other methods: 15.2.4.1, 15.2.7.1, 15.3.4.1, 15.4.2.2, 15.5.1.1.

7.C.12

Part A:
Discharge
policies

Reduce the adverse effects of discharges of human sewage from reticulated wastewater systems by:

- (a) Requiring reticulated wastewater systems to be designed, operated, maintained and monitored in accordance with**

- recognised industry standards; and
- (b) Requiring the implementation of measures to:**
 - (i) Progressively reduce the frequency and volume of wet weather overflows; and**
 - (ii) Minimise the likelihood of dry weather overflows occurring; and**
- (c) Preferring discharges to land over discharges to water, unless adverse effects associated with a discharge to land are greater than a discharge to water; and**
- (d) Having particular regard to any adverse effects on cultural values.**

7.D Policies for discharges of water and contaminants, excluding those discharges provided for in 7.C

7.D.1 Encourage innovation in management practices and the sharing of information, including by:

- (a) Council:**
 - (i) Providing and facilitating the sharing of information on water management and plan implementation including through fora, field days and brochures; and**
 - (ii) Supporting landholders in measuring or assessing contaminants in discharges; and**
 - (iii) Supporting the development of means to measure or assess contaminants in discharges; and**
 - (iv) Monitoring progress towards achievement of water quality objectives and Schedule 15 limits and targets, and making this information available on the Council website.**
- (b) Landholders:**
 - (i) Implementing practices that reduce the level of contaminants in discharges; and**
 - (ii) Providing relevant information to support the catchment or aquifer studies undertaken by Council; and**
 - (iii) Working as a group to achieve good quality water.**

7.D.2 Schedule 16 discharge thresholds apply to permitted activities, from 1 April 2026, at or below the reference flows set in Schedule 16B based on median flows.

7.D.3 Prohibit objectionable discharges of water or contaminants that degrade the natural and human use values, including Kāi Tahu values, of Otago lakes, rivers, wetlands and groundwater.

7.D.4 Provide for the restricted discretionary consenting of any discharge under section 12.C:

- (a) Where changes to land management practices or infrastructure have not been sufficient to meet permitted activity rules; or
- (b) As part of the development of technology or innovative practices associated with improving water quality; or
- (c) From a short-term activity with short-term adverse effects; and the duration will not exceed:
 - (1) Two years for discharges from a short-term activity with short-term adverse effects; or
 - (2) Five years for all other discharges where the contaminants in the discharge result from the activities of the applicant.

7.D5 When considering any discharge under section 12.C, ~~including the duration of any consent~~, have regard to:

Part A:
Discharge
policies

- (a) The effects, including cumulative effects, of the discharge on water quality and natural and human use values, including Kāi Tahu cultural and spiritual beliefs, values and uses; and
- (b) The physical characteristics and any particular sensitivity of the land and any receiving water; and
- (c) The quality and performance of the discharge management system ~~used, or proposed~~ to be used, and in particular, options to be employed to reduce any adverse environmental effects of the activity discharge and monitoring of the performance of the discharge management system; and
- (d) Any staged timeframe and any environmental management plan to achieve:
 - (i) Compliance with the permitted activity rules and Schedule 16 discharge thresholds during the duration of the consent; or
 - (ii) The ongoing reduction of adverse environmental effects of the discharge, ~~where the permitted activity rules and Schedule 16 discharge thresholds cannot be met~~; and
- (e) Trends in the quality of the receiving water relative to the Schedule 15 freshwater characteristics, limits, and targets; and
- (f) The extent to which ~~the risk of~~ potentially significant, adverse effects arising from the discharge activity may be adequately managed through review conditions are avoided; and
- (g) The value of the existing investment in infrastructure; and

- (h) **The current state of technical knowledge and the use of industry best practice for managing environmental effects; and**
- (i) **The extent to which co-ordinating the discharges across multiple landholdings enables water quality objectives to be more effectively met; and**
- (j) **~~Recognising~~ The social, cultural and economic value of the use of land and water that gives rise to the discharge.**

7.D.6 When considering applications for resource consent for discharges of nitrogen under Rule 12.C.3.2:

Part A:
Discharge
policies

- (a) Restrict the duration of resource consents to a term of no more than 10 years; and**
- (b) Have particular regard to:**
 - (i) The water quality of the receiving water body; and**
 - (ii) Any adverse effects on the natural or human use values of the receiving water body as set out in Schedule 1; and**
 - (iii) Any adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses; and**
 - (iv) The expected reduction in nitrogen discharged over the term of the resource consent, particularly from changes to land management practices or infrastructure; and**
 - (iv) The administrative benefits of aligning the expiry date with other resource consents for the same activity in the surrounding area or catchment.**

7.D.7 Ensure the appropriate management and operation of animal waste systems by:

Part B:
Animal waste
storage and
discharge

- (a) Requiring animal waste systems to be designed, constructed and located appropriately and in accordance with best practice; and**
- (b) Ensuring that all animal waste systems:**
 - (i) Have sufficient storage capacity to avoid the need to dispose of effluent when soil moisture or weather conditions may result in run-off entering water; and**
 - (ii) Include contingency measures to prevent discharges to water in the case of equipment or system failure; and**
 - (ii) Are operated in accordance with an operational management plan for the system that is based on best practice guidelines and inspected regularly; and**
- (c) Avoiding the discharge of animal waste to water bodies, artificial watercourses, the coastal marine area and to saturated land; and**
- (d) Requiring low-rate effluent application for any new discharge of animal waste to land and encouraging the transition to low-rate effluent application for existing discharges of animal waste to land.**

7.D.8 Provide for the upgrading of existing animal waste systems that do not meet the standards of Rule 14.7.1.1 by:

Part B:
Animal waste
storage and
discharge

- (a) Granting resource consents only where consent applications contain a timebound action plan for upgrading the existing animal waste system so that it meets the standards of Rule 14.7.1.1 as soon as possible; and**
- (b) Staging implementation of performance standards based on risk.**

7.D.9 Enable farming activities while reducing their adverse environmental effects by:

Part C:
Good farming
practices

- (a) the implementation of good management practices (or better) to reduce sediment and contaminant loss to water bodies; and**
- (b) Managing stock access to water bodies to:**
 - (i) Progressively exclude stock from lakes, wetlands, and continually flowing rivers; and**
 - (ii) Avoid significant adverse effects on water quality, bed and bank integrity and stability, Kai Tahu values, and river and riparian ecosystems and habitats; and**
- (c) Setting minimum standards for intensive grazing; and**
- (d) Managing the risk of sediment run off from farming activities by:**
 - (i) Implementing setbacks from water bodies and establishing riparian margins, and**
 - (ii) Limiting areas and duration of exposed soil; and**
- (e) Promoting the identification and management of critical source areas within individual properties, to reduce the risk of nutrient or microbial contamination and sediment run-off.**

7.D.10 The loss or discharge of sediment from earthworks is avoided or, where avoidance is not achievable, best practice guidelines for minimising sediment loss are implemented.

Part G:
Sediment from
earthworks for
residential
development

7.6 Policies for the enhancement of water quality *[Repealed – 1 May 2014]***7.7 Policies for point source discharges** *[Repealed – 1 May 2014]*

7.7.1 *[Repealed – 1 May 2014]*

7.7.2 *[Amended to 7.B.4 – 1 May 2014]*

7.7.3 *[Renumbered as 7.C.1 – 1 May 2014]*

7.7.4 *[Renumbered as 7.C.2 – 1 May 2014]*

7.7.5 *[Repealed – 1 May 2014]*

7.7.6 *[Amended to 7.B.6 – 1 May 2014]*

7.7.7 *[Renumbered as 7.C.3 – 1 May 2014]*

7.7.8 *[Repealed – 1 May 2014]*

7.7.9 *[Renumbered as 7.C.4 – 1 May 2014]*

7.7.10 *[Renumbered as 7.C.5 – 1 May 2014]*

7.7.11 *[Renumbered as 7.C.6 – 1 May 2014]*

7.8 Policies for non-point source discharges *[Repealed – 1 May 2014]*

7.8.1 *[Repealed – 1 May 2014]*

7.8.2 *[Renumbered as 7.C.7 – 1 May 2014]*

7.8.3 *[Renumbered as 7.C.8 – 1 May 2014]*

7.8.4 *[Renumbered as 7.C.9 – 1 May 2014]*

7.8.5 *[Renumbered as 7.C.10 – 1 May 2014]*

7.8.6 *[Renumbered as 7.C.11 – 1 May 2014]*

7.9 Anticipated environmental results *[Repealed – 1 May 2014]*

W A T E R Q U A L I T Y

8

The Beds and Margins of Lakes and Rivers



8.1 Introduction

The beds and margins of Otago's lakes and rivers are complex and dynamic natural systems. These systems provide diverse habitats for plants and animals, valued mahika kai, and opportunities for recreational use. Their outstanding natural features and landscapes are an integral part of the natural character of the region. The many waahi taonga and waahi tapu sites found on Otago's lake and river margins are of considerable spiritual significance to Kai Tahu. Many pre-European sites may be of archaeological importance. Beds and margins of lakes and rivers also contain a wealth of post-1840 heritage values and resources.

The beds and margins of lakes and rivers are currently used by Otago's people and communities for recreational activities, primary production, navigation, hydro-electric power generation and flood mitigation. Mineral resources contained within these areas, particularly aggregate and gold, are extracted. Residential, commercial and industrial uses may occur in or close to the beds of lakes and rivers. Development also occurs in relation to the need for roads, rail, energy transmission, tele-communications and other services to cross them.

The potential exists for conflicts in resource use on the beds and margins of Otago's lakes and rivers because of the dynamic nature of water flow, sediment transport and flooding, and the diverse range of human activities occurring in these areas. There is therefore a need for management of human activities on the beds and margins of lakes and rivers to avoid, remedy or mitigate their adverse effects, including cumulative effects.

This Plan provides policy and rules in relation to the bed of any lake or river for:

- the use, erection, alteration, extension, removal or demolition of structures;
- bed disturbance;
- the introduction of vegetation;
- the deposition of any substance;
- drainage or reclamation; and
- the removal of any plants.

Appropriate use and management of riparian areas is of importance in the achievement of better water quality and aquatic habitats, and for the maintenance and enhancement of amenity values of lake and river environments. The Plan provides for an integrated approach to riparian management through application of the complementary roles of the regional council and city and district councils.

District plans provide for the integrated management and control of any actual or potential effects of the use, development or protection of land. As such they make an important contribution to riparian management, through esplanade and access provisions relating to land subdivision, and in the control of land use activities. The Regional Policy Statement for Otago and this Plan provide policy guidance to city and district councils in their management of the effects of activities in riparian areas. The Otago Regional Council also has the option of introducing controls on land use where its policy objectives are not otherwise met.

Note: 1. The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes and rivers.
 2. Chapter 10 provides for the management of wetlands.

8.2 Issues

8.2.1 **Changes in the nature of the flow of water and sediment caused by activities in, on, under or over the bed or margin of a lake or river, can adversely affect:**

- (a) **The stability and function of existing structures;**
- (b) **The bedform of the lake or river;**
- (c) **Bed and bank stability; and**
- (d) **Flood carrying capacity.**

Explanation

The following activities in, on, under or over the bed or margin of a lake or river may alter the hydrological or sediment processes which act within a lake or river:

- (a) The use, erection, alteration, extension, removal or demolition of structures;
- (b) Bed disturbance;
- (c) The introduction, disturbance or removal of vegetation;
- (d) The deposition of any substance; and
- (e) Drainage or reclamation of the bed.

Such alteration can arise through the obstruction or redirection of water flow or sediment movement. These changes may exacerbate flooding by reducing channel efficiency, or may cause or worsen bed and bank instability by accelerating erosion or sedimentation. The stability or function of structures downstream on the bed or bank may also be compromised as a consequence, particularly where erosion threatens the supports of a structure. The activities may also lead to a change in the physical nature of the water body's bed (bedform), which may be undesirable if it adversely affects other uses.

Objectives: 8.3.1, 8.3.3

Policies: 8.3.2, 8.4.1, 8.6.1, 8.6.2, 8.6.4, 8.7.1, 8.8.1

8.2.2 **The disturbance of the bed of lakes and rivers has the potential to degrade water quality by reducing the clarity of water.**

Explanation

Bed disturbance includes any excavation, dredging, drilling, tunnelling, and any intentional widening, deepening or alteration of the course of a water body. Intensive use by livestock can also disturb the bed and degrade water quality. Where the bed disturbance occurs in the wet bed, that part of the bed of a lake or river which is covered by water, sediment will be mobilised. The mobilisation of sediment, depending on the scale of the activity, can reduce the clarity of the water by increasing its turbidity. Reduced clarity of water can adversely affect natural and human use values supported by the lake or river, or other users of the water body.

Objectives: 8.3.2

Policies: 8.6.1 to 8.6.3

8.2.3 The erection of a dam in, or the reclamation of, the bed of a lake or river can result in the loss of natural and human use values through their inundation or burial.

Explanation

Lakes and rivers are dammed for a number of reasons ranging from the supply of stock drinking water to the generation of hydro-electric power. Although it can lead to positive community benefits, the damming of water drowns the existing natural and human use values upstream of the dam structure, with the scale of the inundation being dependent on the size of the dam structure and the topography of the surrounding land. Similarly, although the infilling of a bed of a lake or river provides reclaimed land, which may lead to community benefits, it causes similar loss of values through burial. Given the importance of these values to Otago's people and communities, their loss through inundation or displacement may be of concern.

Objectives: 5.3.1 to 5.3.7

Policies: 5.4.10, 8.4.2, 8.5.2, 8.8.1

8.2.4 The failure or overtopping of a dam in the bed of a lake or river can result in the loss of or damage to:

- (a) The health and safety of people and communities;**
 - (b) Property and infrastructure; and**
 - (c) Natural and human use values,**
- should it occur during or after the dam's erection.**

Explanation

Although dams lead to positive benefits to people and communities, they often hold large quantities of water which can lead to extensive damage if there is an uncontrolled release. Such a release could occur through a failure of the structure, or an overtopping caused by, for example, a landslide into the reservoir. The damage, which occurs largely downstream of the dam, may include loss of life, property, infrastructure, or the natural and human use values supported by the affected water bodies. The risk of damage depends on the size of the dam structure, the volume of water impounded and topography.

Objectives: 8.3.4

Policies: 8.5.3

- 8.2.5 Otago’s people and communities are subject to a significant flood hazard, which can be exacerbated by land use activities in, on, under or over the bed and margins of lakes and rivers.**

Explanation

Significant flooding can occur during periods of very high flow in many of Otago’s lakes and rivers. Defences against water have been constructed to protect the region’s people and communities from this flooding hazard for over a century. Such works are ongoing and involve the construction of new defences, such as stopbanks, and the maintenance or repair of those that already exist. Land use activities undertaken in close proximity to defences against water have the potential to adversely affect the manner in which they were designed to function, increasing the flooding risk.

Objectives: 8.3.1, 8.3.3

Policies: 8.4.1, 8.5.4 to 8.5.6

8.3 Objectives

- 8.3.1 To maintain:**

- (a) The stability and function of existing structures located in, on, under or over the bed or margin of any lake or river;**
- (b) The stability of the bed and bank of any lake or river; and**
- (c) The flood and sediment carrying capacity of any lake or river.**

Explanation

Activities in, on, under or over the beds and margins of lakes and rivers have the potential to modify hydrological and fluvial processes through the obstruction or redirection of water or sediment flow. Such changes have the potential to exacerbate flooding, erosion or sedimentation hazards, and adversely affect the stability or function of structures.

Principal reasons for adopting

This objective is adopted to recognise that activities occurring in, on, under or over the bed or margins of lakes and rivers can exacerbate or create hazards by changing hydrological or fluvial processes. It is important that such hazards are avoided due to their potential threat to structures located in close proximity to the bed, and to Otago’s people and communities generally.

Policies: 8.4.1, 8.5.3 to 8.5.6, 8.6.2, 8.6.4, 8.7.1, 8.7.2, 8.8.1

- 8.3.2 To minimise reduction in water clarity caused by bed disturbance.**

Explanation

Activities in the bed or margins of lakes and rivers which involve disturbance of the bed can increase the turbidity of the water. This occurs where sediments in

the bed are mobilised and are suspended in the water, thereby reducing water clarity. Any reduction in water quality caused by bed disturbance can adversely affect the natural and human use values supported by the water body and other users of water.

Principal reasons for adopting

This objective is adopted to ensure that activities involving bed disturbance are managed to minimise reductions in water clarity. Such reductions are generally undesirable due to the potential to adversely affect the values and uses supported by the water body.

Policies: 8.6.1 to 8.6.3

8.3.3 To maintain the integrity of existing defences against water.

Explanation

Defences against water, such as stopbanks, have been used extensively throughout Otago to reduce the threat of flooding. These defences are an integral component of the community’s response to flood events. It is important that these works are able to continue to operate effectively.

Principal reasons for adopting

This objective is adopted to avoid or minimise the risk of flooding which adversely affects Otago’s people and communities. This risk may be increased where land use activities threaten the integrity or function of existing defences against water.

Policies: 8.5.5, 8.5.6

8.3.4 To remedy any adverse effect resulting from the failure or overtopping of any dam structure.

Explanation

Damage from dam failure or overtopping needs to be avoided but, in the event that it occurs, appropriate remedial actions will be required. Due to the risk involved, it is necessary to plan for the possible need to remedy any loss or damage caused.

Principal reasons for adopting

This objective is adopted to ensure that loss or damage that occurs as a result of dam failure or overtopping will be remedied.

Policies: 8.5.3

8.4 General policies

8.4.1 When managing activities in, on, under or over the bed or margin of any lake or river, to give priority to avoiding changes in the nature of flow and sediment processes in those water bodies, where those changes will cause adverse effects:

- (a) **On the stability and function of existing structures located in, on, under or over the bed or margin of any lake or river;**
- (b) **Arising from associated erosion or sedimentation of the bed or margin of any lake or river, or land instability; or**
- (c) **Arising from any reduction in the flood carrying capacity of any lake or river.**

Explanation

This policy recognises that activities in, on, under or over the bed or margins of a lake or river may obstruct or redirect the flow of water or sediment, thereby adversely affecting structures or exacerbating a natural hazard, such as flooding, erosion, land instability or sedimentation. The potential for such effects needs to be taken into account when preparing or reviewing plans under the Resource Management Act and when considering applications for resource consents for activities in, on, under or over the bed or margins of lakes and rivers. Where changes in flow and sediment processes are considered to be unavoidable, a resource consent may be declined or, if granted, may be subject to conditions requiring unavoidable adverse effects to be remedied or mitigated. In the case of diversion, reclamation or damming, appropriate compensation may be required as provided for by Policies 6.5.6 and 8.4.2.

Principal reasons for adopting

This policy is adopted to ensure that the natural and physical resources of the beds and margins of lakes and rivers are protected from the adverse effects of the modification of flow and sediment processes.

Rules: 13.1.2.1, 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1

Other methods: 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1

8.4.2 Financial contributions, or works or services may be required to offset, remedy or mitigate any unavoidable adverse effect of damming or reclamation on:

- (a) **Any natural or human use value identified in Schedule 1;**
- (b) **The natural character of the water body;**
- (c) **Any amenity value supported by the water body; or**
- (d) **Any heritage value associated with any affected water body.**

Explanation

The damming or reclamation of the bed or margins of Otago’s lakes and rivers can result in unavoidable adverse effects on the natural and human use values supported by the water body. Where such effects occur, financial contributions, or works or services, may be required as a condition of a resource consent to offset, remedy or mitigate the effects. The amount and type of financial contribution, or the type of work or service, will depend on the nature of the activity and will relate to the adverse effects on the natural and human use values. Financial contributions are detailed in Chapter 17 of this Plan. Recognition will be given to the extent to which resource use and development has modified the water body, and the positive effects of the proposed activity

will be taken into account, when assessing any requirement for financial contributions, or works or services.

Principal reasons for adopting

This policy is adopted to ensure provision is made to either offset, remedy or mitigate any unavoidable adverse effect of damming or reclamation activities on the beds and margins of lakes and rivers.

Rules: 12.3.3.1, 12.3.4.1, 13.2.3.1, 13.3.2.1, 13.5.3.1

See also: Chapter 17; Policies 6.5.6, 10.4.2A

8.5 Policies applying to structures

8.5.1 To require, where necessary, desirable and practicable, any structure in or on the bed of any lake or river to provide for fish migration through or past it, or alternative remedial measures where fish migration is not practicable.

Explanation

Where the Otago Regional Council requires a resource consent for a structure, it will consider requiring the person erecting or placing the structure to provide means for the upstream and downstream passage of fish. This requirement is only necessary where the structure is likely to restrict fish passage. There are situations where passage may not be necessary or desirable, for a variety of reasons, and these need to be assessed on a case-by-case basis. Although it will be sought in the first instance, it may not always be possible to provide an effective fish pass given the nature of the structure. In such circumstances, the Council may require remedial actions. Those structures erected under a permitted activity rule of this Plan will still have to comply with the requirements of the Freshwater Fisheries Regulations 1983 with respect to fish passage, administered by the Department of Conservation.

Principal reasons for adopting

This policy is adopted to provide for the unimpeded migration of fish, where necessary, desirable and practicable, or alternative remedial measures where fish migration is not practicable. Many of the region’s native fish species, for example eels, and introduced trout and salmon, migrate to or from the sea, or up and down water bodies. Because these fish species require different aquatic habitats at different life stages, unimpeded access is essential to the survival of local fish populations.

Rules: 13.2.2.1, 13.2.3.1

8.5.2 To prohibit the erection of a dam on the bed of lakes or rivers in parts of the following catchments in accordance with Schedule 6:

- (a) Kawarau River;**
- (b) Lake Wanaka and Upper Clutha River/Mata-Au;**
- (c) Pomahaka River;**

- (d) **Waipahi River; and**
- (e) **Lower Clutha River/Mata-Au.**

Explanation

This policy provides for the prohibition of damming in the identified catchments. Schedule 6 provides further detail in respect of the water bodies within these catchments on which dams will be prohibited. Regarding the Pomahaka River and Waipahi River catchments, and the Lower Clutha River/Mata-Au, the prohibition on damming does not extend to damming for stockwater supply purposes.

Principal reasons for adopting

The Water Conservation (Kawarau) Order and the Lake Wanaka Preservation Act prohibit the damming of water. The Pomahaka River and Tributaries and Lower Clutha River/Mata-Au Local Water Conservation Notice, deleted by this Plan, also prohibited the damming of water. It is therefore appropriate, for consistency, to prohibit the damming of the same waters within this Plan.

Rules: 12.3.1.1 to 12.3.1.3

- 8.5.3 To require the holder of any resource consent for a dam on the bed of a lake or river to remedy any adverse effect attributable to the failure or overtopping of the dam structure, either during or after its construction.**

Explanation

Where the Otago Regional Council requires a resource consent for:

- (a) The damming of water; or
- (b) The erection of a dam;

it will require the person erecting the dam to plan for and provide appropriate measures to remedy any loss or damage caused by the failure or overtopping of the dam at any stage.

These measures may include:

- (i) Bonds, as provided for by Section 108 of the Resource Management Act;
- (ii) Insurance; or
- (iii) Other appropriate means.

Remedial action will be required only where adverse effects of any failure or overtopping can be attributed to the dam, as opposed to those that may have occurred in the absence of the dam.

Required remediation may be assessed as appropriate having regard to the necessity and practicability of reinstating prior conditions, and alternative options that may compensate for losses suffered by the affected community.

Principal reasons for adopting

This policy is adopted to provide for the remediation of adverse effects arising from the failure or overtopping of a dam. The policy also provides an incentive for dam owners to undergo ongoing risk management.

Rules: 12.3.3.1, 12.3.4.1, 13.2.3.1, 13.3.2.1

8.5.4 To consider the removal of any abandoned structure in, on, under or over the bed of a lake or river which can be shown to significantly:

- (a) Exacerbate the effects of flooding or erosion;**
- (b) Impede or prevent fish passage, where such passage is desirable;**
- (c) Threaten the health or safety of people or communities; or**
- (d) Degrade amenity values.**

Explanation

The holder of the relevant resource consent authorising an abandoned structure, or its owner, may be required to remove the structure where it is shown to be:

- (i) Unable to withstand expected hazard events, such as floods or erosion;
- (ii) Capable of significantly worsening flood or erosion situations, including bank instability, either directly or because of lack of maintenance;
- (iii) Impeding or preventing fish passage where such passage is required, given the vulnerability of some isolated populations of native fish;
- (iv) Unstable, or significantly threatening public health and safety in some other way; or
- (v) Degrading scenic values associated with, or recreational opportunities provided by, the water body.

This removal will be required either through a condition of a resource consent, or through an enforcement order where there is no such condition or resource consent. Such removal will be subject to this Plan’s provisions concerning discharges and bed and margin disturbance. The community may need to be consulted about abandoned structures prior to their removal.

Where such structures are of heritage value and are causing adverse effects associated with flooding, erosion, or threats to the health and safety of people and communities, their removal may not be necessary as long as those effects are adequately remedied or mitigated.

Principal reasons for adopting

This policy is adopted to avoid any of the adverse effects caused by abandoned structures within the bed of a lake or river through their removal. The removal of sites, buildings, places or areas of significant heritage value, such as historic wing dams and revetments may not be required, as they are significant cultural resources and are valued for their amenity.

Rules: 13.4.2.1

8.5.5 In considering the construction, reconstruction or modification of defences against water, to have regard to:

- (a) The effectiveness of the proposed work;**
- (b) The need for the defence; and**
- (c) Any effect on existing defences.**

Explanation

Defences against water are important in Otago as they mitigate flood and erosion hazards. Prior to constructing any new defence, or reconstructing or modifying an existing defence, consideration must be given to whether hazard mitigation is actually required, and how the structure will perform in relation to existing defences against water.

Principal reasons for adopting

This policy is adopted to ensure that flood or erosion protection structures are constructed in a coordinated and integrated manner, and do not compromise any other flood or erosion response. This will result in the effective performance of such structures and a reduction in the potential adverse effects of any flood or erosion event.

Rules: 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.6.3.1, 14.3.2.1, 14.4.2.1

Other methods: 15.2.7.1, 15.2.8.1, 15.2.8.2, 15.3.3.1, 15.3.3.2

8.5.6 To manage activities that have the potential to adversely affect existing defences against water.

Explanation

Defences against water are often located in or on the bed or margins of lakes and rivers to protect Otago's people and communities from the adverse effects of flooding. Activities undertaken on, or in close proximity to such works have the potential to adversely affect the manner in which they were designed to function.

Principal reasons for adopting

This policy is adopted to maintain the integrity of defences against water located in or on the bed or margins of lakes and rivers. If these works are able to operate as intended, the risk of flooding adversely affecting Otago's people and communities will be reduced.

Rules: 13.2.2.1, 13.2.3.1, 13.3.2.1, 13.4.2.1, 13.5.2.1, 13.5.3.1, 13.6.3.1, 13.7.2.1

Other methods: 15.2.7.1, 15.2.8.1, 15.2.8.2, 15.3.3.1, 15.3.3.2

8.6 Policies applying to bed or margin disturbance

8.6.1 In managing the disturbance of the bed or margin of any lake or river, to have regard to any adverse effect on:

- (a) The spawning requirements of indigenous fauna, and trout or salmon;**

- (b) **Bed and bank stability;**
- (c) **Water quality;**
- (d) **Amenity values caused by any reduction in water clarity; and**
- (e) **Downstream users.**

Explanation

Bed disturbance can lead to a change in bedform, or a reduction in clarity downstream, and may consequently adversely affect fish spawning, bed and bank stability, water quality, amenity values and downstream users. When considering activities that would result in bed disturbance, it is important to have regard to the potential for these adverse effects. Policy 5.4.2 manages any adverse effects on natural and human use values.

Principal reasons for adopting

This policy is adopted to provide recognition that there are natural and human use values and other uses of water that are particularly susceptible to the physical changes caused by disturbance of the bed. Such values and uses will be maintained where the adverse effects of bed disturbance are avoided, remedied or mitigated.

Rules: 13.5.2.1, 13.5.3.1, 13.6.3.1, 13.7.2.1

Other methods: 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2, 15.5.1.1

See also: Chapter 7

8.6.2 To promote best management practices for activities that occur within or adjacent to the bed of lakes and rivers in order to avoid, remedy or mitigate any adverse effect.

Explanation

A variety of land use activities can occur within or adjacent to the beds of lakes and rivers including grazing, cultivation, forestry, river works and pest control. Due to their proximity to such water bodies, these activities have the potential to adversely affect the natural and human use values supported by them. The Otago Regional Council has prepared best management practices, in conjunction with Federated Farmers, the forestry industry, government departments and the Otago Fish and Game Council, for the above activities. Some of these are included in the Council’s “Riparian Management” document. The Otago Regional Council will encourage the adoption of these and other best management practices that avoid, remedy or mitigate any adverse effects on the environment.

Principal reasons for adopting

This policy is adopted to encourage the voluntary use of best management practices by those undertaking activities within the bed or margins of lakes and rivers. The best management practices bring together the best information available on how to minimise the impact of such activities on water resources.

Other methods: 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2, 15.5.1.1

See also: Chapter 7

8.6.3 To provide for small suction dredge mining operations in rivers without the need for a resource consent, except in those water bodies identified in Schedule 7.

Explanation

Suction dredge mining involves the disturbance of sand and gravel in the wet bed of rivers and can cause significant adverse effects. Suction dredging operations that comply with Rule 13.5.1.7 will not give rise to any significant bed disturbance. However, some Otago rivers, identified in Schedule 7 of this Plan, have a unique value for fish spawning and rearing, are important for water supply purposes or are particularly sensitive to bed damage.

Principal reasons for adopting

This policy is adopted to avoid unnecessary constraint on suction dredging operations that involve minimal bed disturbance, while recognising that tighter restriction should apply where water bodies are particularly sensitive to such disturbance.

Rules: 13.5.1.7

8.6.4 To ensure that any extraction of bed material from the bed of any lake or river is within the sustainable yield of the lake or river system.

Explanation

Bed material, particularly sand and gravel, is an important resource of Otago's lakes and rivers. Over-extraction of such material can result in changes in river morphology and lead to adverse effects. Over-extraction occurs where the total quantity of bed material removed exceeds the quantity naturally replenished. Therefore, when considering the extraction of bed material, regard will be had to the location of the extraction and the cumulative volume of material removed from a particular water body, to ensure that extraction is at a sustainable level.

Principal reasons for adopting

This policy is adopted to ensure that the extraction of bed material from a lake or river is sustainable. This will ensure that long term effects caused by over-extraction, such as lowering the level of the bed and bank erosion, are avoided.

Rules: 13.5.1.6, 13.5.2.1, 13.5.3.1

Other methods: 15.2.8.3

8.6.5 With respect to the Kakanui-Kauru Alluvium and Shag Alluvium groundwater aquifers, to require that any extraction of material from the bed of a lake or river does not adversely affect the aquifer.

Explanation

When considering the extraction of bed material from the Kakanui and Shag Rivers, or other surface water bodies in close proximity to the Kakanui-Kauru Alluvium and Shag Alluvium Aquifers, regard must be had to the effect of that

extraction on the groundwater resource. The Kakanui-Kauru Alluvium and Shag Alluvium Aquifers are identified on Maps C17, C18 and C19.

Principal reasons for adopting

This policy is adopted to maintain the volume and yield of groundwater from the Kakanui-Kauru Alluvium and Shag Alluvium Aquifers. Extraction of bed material from surface water bodies can lower the watertable of these aquifers due to the close hydrological connection between the surface water and groundwater. This will adversely affect groundwater users.

Rules: 13.5.1.6, 13.5.2.1, 13.5.3.1

See also: Chapter 9

8.7 Policies applying to vegetation

8.7.1 To promote the creation, retention and enhancement of appropriate riparian vegetation where it will:

- (a) **Maintain or enhance water quality, through the interception of non-point source contamination from adjacent land;**
- (b) **Enhance the aquatic ecosystems within a water body, and the habitat for flora and fauna on the margins;**
- (c) **Maintain or enhance the natural character of lakes and rivers and their margins;**
- (d) **Maintain or enhance amenity values;**
- (e) **Avoid, remedy or mitigate the adverse effects arising from flooding or erosion;**
- (f) **Be unlikely to have a significant adverse effect on desirable species already present, or adjacent to, and downstream from, that riparian vegetation;**
- (g) **Be unlikely to restrict existing public access along the beds and margins of Otago’s lakes and rivers;**
- (h) **Be unlikely to have a significant adverse effect on the heritage value of any site, building, place or area;**
- (i) **Be unlikely to impose any significant operational constraints on existing network utilities; or**
- (j) **Enhance mahika kai values.**

Explanation

Appropriate riparian vegetation includes:

- (a) Any plant indigenous to the region;
- (b) Any introduced non-invasive plant, planted for flood or erosion control;
- (c) Any traditional mahika kai plant used by Kai Tahu for any purpose; and
- (d) Any introduced non-invasive plant, that contributes to the natural character of the lake or river.

This vegetation does not include plants identified in the Pest Management Strategy for Otago 2009, or crack or grey willow which are likely to increase the risk of flooding through impeding flood waters.

This policy will be implemented through district planning mechanisms and through this Plan promoting riparian land occupiers and others to assess opportunities for the creation, retention and enhancement of riparian vegetation. To this end, the Otago Regional Council has released guidelines, in the document “Riparian Management”, which provide information on planning a revegetation programme, fencing and site preparation, species selection and planting methods.

Principal reasons for adopting

This policy is adopted to encourage Otago’s people and communities to retain and plant riparian vegetation where it will achieve the specified outcomes. Appropriate riparian vegetation acts as a buffer between a lake or a river and the adjacent land uses by reducing the amount of nutrients and other contaminants entering the water, through filtration, and plant and microbial uptake. It also contributes to habitat values as an integral component of the natural character of many Otago lakes and rivers, and can assist bank stability and the mitigation of flooding or erosion hazards.

Other methods: 15.2.8.1 to 15.2.8.3, 15.6.1.1

See also: Chapter 7

8.7.2 To prohibit the introduction of any plant included in any pest management strategy in force in Otago, to any part of the bed or water of any Otago lake or river.

Explanation

The following aquatic plants are undesirable in or on the beds, or in the water of Otago’s lakes and rivers and are identified as requiring management in the Pest Management Strategy for Otago 2009:

- (a) Lagarosiphon *Lagarosiphon major*
- (b) Eel Grass *Vallisneria spiralis*
- (c) Egeria *Egeria densa*
- (d) Hornwort *Ceratophyllum demersum*
- (e) Hydrilla *Hydrilla verticillata*
- (f) Sagittaria *Sagittaria graminea ssp platyphylla*
- (g) Spartina *Spartina anglica*
- (h) Salvinia *Salvinia molesta*
- (i) Water Hyacinth *Eichhornia crassipes*
- (j) Water Lettuce *Pistia stratiotes*

This Plan prohibits the introduction of any of the identified species to the bed or water of any lake or river.

Principal reasons for adopting

This policy is adopted to provide for the management of aquatic pest plants consistent with the Pest Management Strategy for Otago 2009. This will assist in protecting the natural character of water bodies where the identified aquatic pest plants are not already present.

Rules: 13.6.1.1

8.8 Policies applying to reclamation and deposition

8.8.1 To consider practical alternatives to:

- (a) The reclamation of the bed of any lake or river; and**
- (b) The deposition of any substance in, on or under, the bed or margin of any lake or river.**

Explanation

When considering the reclamation of the bed, or activities that would result in deposition, it is important to have regard to alternatives, including use of other land or deposition away from the bed or margin of the lake or river.

Principal reasons for adopting

This policy is adopted to ensure that reclamation or the deposition of substances in or on the beds or margins of lakes and rivers only takes place where it is necessary. This approach recognises that reclamation or deposition should be discouraged wherever possible, as these activities can have significant adverse effects on the natural and human use values of lakes and rivers, or create or exacerbate hazards.

Rules: 13.5.3.1

Other methods: 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2

8.8.2 To require only cleanfill be used to create any reclamation of the bed of a lake or river.

Explanation

The Otago Regional Council will only allow cleanfill to be used to create a reclamation of the bed of a lake or river. Cleanfill includes natural and other materials which are not subject to biological or chemical breakdown. Even where cleanfill is used, the reclamation may still result in temporary discharges to water. These discharges will be subject to the provisions of this Plan.

Principal reasons for adopting

This policy is adopted to reduce the discharge of contaminants from material used to create reclamations. This is best achieved by requiring that material be cleanfill, as this reduces the contaminants which are likely to, or have the potential to, adversely affect water quality in Otago's lakes and rivers.

Rules: 13.5.3.1

See also: Chapter 7

8.9 Anticipated environmental results

- 8.9.1** Activities which alter the existing nature of natural physical processes do not exacerbate natural hazards or threaten the integrity of structures.
- 8.9.2** Physical changes to bedform of lakes and rivers and water clarity caused by bed disturbance are minimised.
- 8.9.3** Existing fish passage in lakes and rivers is not inhibited by structures.
- 8.9.4** Otago’s people and communities are protected from the adverse effects of flooding.
- 8.9.5** The water quality of lakes and rivers is not adversely affected by the disturbance and reclamation of the bed.
- 8.9.6** Gravel extraction occurs within the sustainable yield.
- 8.9.7** Existing areas of riparian vegetation are retained or enhanced, and areas of new riparian vegetation are created, where they provide an environmental benefit.
- 8.9.8** The habitat of threatened indigenous aquatic fauna and flora is protected.
- 8.9.9** Hazard mitigation works, depositions, or reclamations associated with the beds of lakes or rivers occur only where they are necessary.
- 8.9.10** The unavoidable adverse effects of inundation resulting from the damming of water are remedied.
- 8.9.11** Any damage caused by failure or overtopping of a dam structure is remedied.
- 8.9.12** Damming of water does not occur in the following catchments except as provided for by legislation or Rule 12.3.1.3 of this Plan:
 - (a) Kawarau River;
 - (b) Lake Wanaka and the Upper Clutha River/Mata-Au;
 - (c) Pomahaka River;
 - (d) Waipahi River; and
 - (e) Lower Clutha River/Mata-Au.
- 8.9.13** Waahi taonga and waahi tapu sites are not adversely affected by activities on the beds or margins of lakes or rivers.

Monitoring of the achievement of these anticipated environmental results will be carried out as outlined in Chapter 19.

T H E B E D S A N D M A R G I N S O F L A K E S A N D R I V E R S

9

Groundwater



9.1 Introduction

Groundwater is the water that occupies or moves through openings, cavities or spaces in geological formations under the ground. It is an important resource to many of Otago's communities, where it serves a number of recognised uses. These uses include domestic and public water supply, stock drinking water, irrigation and industrial uses. Groundwater and associated springs are valued by Kai Tahu, who find discharges containing human sewage to such water culturally offensive.

The effects of inappropriate land and water use and development on groundwater quantity and quality are often long term, and in some cases may be permanent. It is therefore important that particular consideration be given to the protection of aquifers for the continued benefit of present and future generations.

There is often a hydrological connection between surface water and groundwater. Where the connection is significant, there needs to be recognition of the fact that the use of either surface water or groundwater can affect the other. For this reason, water quantity issues are addressed in Chapter 6.

The Regional Policy Statement for Otago requires that water quality be maintained or enhanced (Policy 6.5.5), in order to provide for the present and future needs of Otago's people and communities. This chapter applies the direction given by the Regional Policy Statement to the management of water and land use activities affecting groundwater, to achieve the above outcomes.

Note: The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes and rivers.

9.2 Issues

9.2.1 *[Repealed – 1 March 2012]*

9.2.2 *[Repealed – 1 March 2012]*

9.2.3 **Groundwater resources can become contaminated as a result of:**

- (a) Point source discharge of effluent onto or into land;**
- (b) Land use activities which result in non-point source discharge of effluent, nutrients or other contaminants;**
- (c) The accidental spill of a hazardous substance, when they occur in groundwater recharge areas, and**
- (d) Excavation of any protective soil mantle or impervious strata overlying an aquifer.**

Explanation

Groundwater quality is at risk of being degraded by the infiltration of contaminants into aquifers. The contaminants may be sourced from the land application of effluent, land use activities which create non-point source

discharges, or from accidental spills. The discharge of these contaminants can undermine all efforts previously made to maintain or enhance groundwater quality.

As well as the nature and quantity of the substance involved, the risk of contamination from any of the above activities is determined by hydrology, soil and geological characteristics of the aquifer and overlying material, and therefore varies from place to place. Some groundwater resources are protected from the infiltration of contaminants by a relatively thin layer of soil or impervious sediment, which excavation can remove or compromise.

Objectives: 9.3.3

Policies: 9.4.2, 9.4.18 to 9.4.21

See also: Chapter 7

9.2.4 The siting, construction and operation of groundwater bores and other drill holes can lead to the contamination of groundwater resources.

Explanation

Bores and other drill holes may be located, constructed or operated in a manner that allows contaminants to enter groundwater. The greatest risk of contamination occurs where bore heads or drill holes are not protected from surface drainage, potentially allowing contaminants in runoff to enter the aquifer. This may be exacerbated by the use of potential contaminants close to the bore or drill hole. The bore or drill hole may also be constructed or operated in a manner which allows the movement of poor quality water between aquifers when they are penetrated by the same hole. Since groundwater contamination can be long term, threatening public health and the current uses of the groundwater, it is important that such contamination be avoided.

Objectives: 9.3.3

Policies: 9.4.14 to 9.4.17

9.2.5 Over-use of poor quality groundwater for irrigation may degrade soil resources.

Explanation

Groundwater in certain parts of Otago may be of poor quality. The groundwater of the Waiareka Volcanic Tuff formation (within the western part of the North Otago Volcanic Aquifer), for example, is naturally high in sodium. There is potential for long term degradation of soil health through application of this water for irrigation. While the affected communities are usually aware of this problem and are taking measures to address it, there is a need to evaluate the potential for soil degradation in the granting of any consent to use groundwater for irrigation purposes.

9.3 Objectives

9.3.1 To sustain the recognised uses of Otago’s groundwater.

Explanation

Groundwater is an important resource in certain areas of Otago as it provides water for domestic and public water supply, stock drinking water, industry and irrigation. The recognised uses of specific aquifers are identified in Schedule 3 of this Plan. This objective seeks to sustain these consumptive uses for the continued benefit of present and future generations.

Principal reasons for adopting

This objective is adopted to ensure that present and future generations can continue to benefit from Otago’s significant groundwater resources.

Policies: 9.4.1, 9.4.2

See also: Objective 9.3.1

9.3.2 *[Repealed – 1 March 2012]*

9.3.3 To maintain the quality of Otago’s groundwater.

Explanation

It is important to maintain the existing groundwater quality of Otago’s aquifers in order to provide for the existing and potential uses of water. Groundwater can be contaminated through inappropriate land use, discharge or accidental spill of contaminants, over-abstraction of water, and inappropriate siting, construction and operation of bores.

Principal reasons for adopting

This objective is adopted to avoid the irreversible or long term contamination of groundwater caused by the discharge of contaminants or by the excessive taking of groundwater. This will ensure that the quality of the groundwater is sufficient for existing and future users.

Policies: 9.4.1, 9.4.2, 9.4.4 to 9.4.6, 9.4.10, 9.4.14, 9.4.17 to 9.4.21

9.3.4 *[Repealed – 1 March 2012]*

9.3.5 To avoid degradation of soils arising from the inappropriate application of poor quality groundwater.

Explanation

Groundwater is used for irrigation in several parts of Otago. Where the quality of groundwater used is likely to lead to the long term degradation of soil health, the management of irrigation practices may need to be modified to avoid this adverse effect.

Principal reasons for adopting

This objective is adopted to ensure the productive capacity of soil is not compromised, for present and future generations, as a result of irrigation by poor quality groundwater.

Policies: 9.4.2, 9.4.23

9.4 Policies

- 9.4.1 In managing any activity involving the taking of groundwater or the discharge of contaminants, to ensure that the suitability of aquifers to support the recognised uses of groundwater identified in Schedule 3 is maintained.**

Explanation

The recognised uses of certain aquifers, identified in Schedule 3 of this Plan, can be adversely affected by the taking of water, or the discharge of contaminants to land or directly into groundwater. When considering these activities, regard must be had to avoiding adverse effects on the identified uses. Where uses are identified for other aquifers, they can still be given recognition when considering individual resource consents.

Principal reasons for adopting

This policy is adopted to ensure that the recognised uses of certain aquifers, identified in Schedule 3 of this Plan, are maintained. It is important to retain the ability of the groundwater to meet the present needs of groundwater users due to their reliance upon the water.

Rules: 12.2.3.1 to 12.2.4.1, 12.A.2.1, 12.B.3.1, 14.2.2.1, 14.2.3.1

Other methods: 15.2.2.1, 15.3.1.1, 15.4.2.1, 15.4.2.2

- 9.4.2 In managing the taking of water from any groundwater aquifer, to give priority to avoiding, in preference to remedying or mitigating irreversible or long term degradation of soils arising from use of the water for irrigation.**

Explanation

The use of poor quality groundwater can degrade soil resources. When considering the taking of water from any groundwater aquifer, priority will be given to avoiding the adverse effects identified. If the adverse effects of the taking are considered to be unavoidable, the adverse effects must be remedied or mitigated.

Principal reasons for adopting

The policy will assist to maintain soil quality where it may be adversely affected by the application of groundwater.

Rules: 12.2.3.1 to 12.2.4.1

Other methods: 15.2.2.1

9.4.3 *[Repealed – 1 March 2012]*

9.4.4 *[Repealed – 1 March 2012]*

9.4.5 *[Repealed – 1 March 2012]*

9.4.6 *[Repealed – 1 March 2012]*

9.4.7 *[Repealed – 1 March 2012]*

9.4.8 *[Repealed – 1 March 2012]*

9.4.9 *[Repealed – 1 March 2012]*

9.4.10 *[Repealed – 1 March 2012]*

9.4.11 *[Repealed – 1 March 2012]*

9.4.12 *[Repealed – 1 March 2012]*

9.4.13 *[Repealed – 1 March 2012]*

9.4.14 To require appropriate siting, construction and operation of new groundwater bores, to prevent:

- (a) Contaminants from entering an aquifer; and**
- (b) The contamination of groundwater in any aquifer from the groundwater in another aquifer; and**

to promote such management for existing bores.

Explanation

Bores may be located, constructed or operated in such a manner that allows contaminants to enter groundwater. For new bores, the opportunity exists to avoid such adverse effects by requiring:

- Their siting in an area where runoff cannot enter them; or
- Bunding, so that runoff or accidental spills cannot enter them; and
- Bore casings which prevent movement of poor quality water between aquifers.

The opportunity to upgrade existing bores to meet these same standards will be taken through promotion programmes.

Principal reasons for adopting

This policy is adopted to ensure that bores are sited, constructed and operated in a manner that maintains the water quality within an aquifer. This is important so that present and future uses can be supported by the aquifer. Appropriate measures can be required through a condition on a resource consent for any new bore, while promotion will be most effective in achieving these standards with existing bores.

9.4.15 *[Repealed – 1 March 2012]*

9.4.16 *[Repealed – 1 March 2012]*

9.4.17 **To require new drill holes to be appropriately sealed to prevent contaminants entering any aquifer.**

Explanation

Drill holes can be located where runoff containing contaminants may enter groundwater. For new drill holes, this can be avoided by requiring that the drill hole be sealed before the hole is abandoned. Sealing would be considered appropriate if it prevents runoff from entering the hole, and prevents water moving between aquifers.

Principal reasons for adopting

This policy is adopted to ensure that inadvertent contamination of aquifers does not occur through new drill holes intercepting groundwater and being left in a way that allows aquifer contamination. This is important so that present and future users can utilise the aquifer.

Rules: 14.2.2.1, 14.2.3.1

9.4.18 **To identify land of high risk in terms of the vulnerability of underlying groundwater to leachate contamination and to manage, with respect to this land:**

- (a) **Change in land use to activities which have the potential to result in leachate discharges, so that the activities are, where practicable, located elsewhere, or contaminants are contained;**
- (b) **Existing land use activities so that any potential for groundwater contamination is monitored and, where necessary, corrective action is taken;**
- (c) **Point source discharges of water or contaminants to land or groundwater; and**
- (d) **Excavation, so that any protective soil mantle or impervious stratum is retained, replaced, or alternative groundwater protection is provided.**

Explanation

The vulnerability of aquifers to leachate contamination is determined by the depth of the aquifer and the permeability of the overlying soil or rock. Any area of land, over parts of aquifers which are considered to be high risk in this regard, is identified as Zone A of the Groundwater Protection Zones on the C-series maps.

In this zone, change of land use to activities likely to generate leachate should, where practicable, be avoided. Where it is not considered possible to do so,

provision must be made to contain any leachate generated. City and district councils will manage such land use change within Zone A in accordance with the direction provided by this policy.

The groundwater beneath existing land use activities in Zone A will be monitored by the Otago Regional Council. Where land use in this zone is observed to be adversely affecting groundwater quality, actions will be required to avoid the effect, such as appropriate storage and handling of hazardous substances, or adequate spills containment.

Discharges of water or contaminants to land or directly into groundwater also have the potential to degrade groundwater quality in Zone A.

Excavation of the land in Zone A may further increase the vulnerability of the aquifer by removing the protective soil mantle or impervious stratum. As such, city and district councils will manage excavation within Zone A in accordance with the direction provided by this policy.

It is recognised that development for primary production including increased use of irrigation will lead to intensification of land use which, in turn, may increase the risk of the contamination of water, but that in some cases land use practices can lead to improved health of the soil mantle and a subsequent decreased risk to underlying aquifers.

Principal reasons for adopting

This policy is adopted to minimise and, as far as possible, avoid the potential for long term contamination of groundwater resources from leaching liquid contaminants. It is important to maintain existing groundwater quality in Otago's aquifers to provide for the existing and potential uses to which that water can be put by the region's people and communities.

Rules: 12.A.2.1, 12.B.2.1, 12.B.3.1

Other methods: 15.2.7.1, 15.3.2.1, 15.4.2.2

- 9.4.19 To identify land which protects underlying aquifers from leachate contamination and to manage excavation, with respect to this land, so that any protective soil mantle or impervious stratum is retained or replaced, or alternative groundwater protection is provided.**

Explanation

Some aquifers are protected from leaching contaminant discharges by a layer of soil or impervious sediment. Zone B of the Groundwater Protection Zones is of generally low risk in terms of groundwater vulnerability, provided these protective soils or sediments are not compromised by inappropriate excavation. As such, city and district councils will manage excavation within Zone B in accordance with the direction provided by this policy. Zone B of each Groundwater Protection Zone is identified on the C-series maps.

Principal reasons for adopting

This policy is adopted to ensure that the protection from leachate contamination provided by the soil mantle or impervious strata is maintained. This will assist to avoid the long term contamination of groundwater resources from leaching liquid contaminants.

Other methods: 15.2.7.1

- 9.4.20 To require that all practical alternative locations for the storage of hazardous substances have been considered before such storage occurs over Zone A of any Groundwater Protection Zone identified on the C-series maps.**

Explanation

Although the use of hazardous substances may provide benefits to the community, the storage of such substances over aquifers vulnerable to leachate contamination also represents a risk of contamination through spillage. Any person intending to store hazardous substances in Zone A of a Groundwater Protection Zone will require land use consent from the relevant city or district council. The C-series maps show the land to which the above requirements will apply. The applicant will have to demonstrate that there are no practical alternative locations to store the substance.

Principal reasons for adopting

This policy is adopted to avoid the discharge into groundwater where hazardous substances are inappropriately stored. There is increased likelihood of such contamination where the storage occurs in land over a vulnerable part of an aquifer. Such discharges will adversely affect water quality and the ability of Otago's people and communities to use the resource.

Other methods: 15.2.7.1, 15.4.2.2

- 9.4.21 To support appropriate codes of practice and management guidelines for land use activities which may result in contaminants entering groundwater.**

Explanation

The Council supports codes of practice and management guidelines that reduce the adverse effects of land use activities on groundwater quality. This will involve:

- (a) Working with relevant industry and community groups to identify how land use activities can be carried out in ways which minimise contaminants leaching to groundwater; and
- (b) Working with those who take groundwater to ensure that activities which have the potential to contaminate groundwater are located at safe distances from bores.

Principal reasons for adopting

This policy is adopted to encourage voluntary action by landholders to improve land management practices in terms of their effect on groundwater quality.

Other methods: 15.5.1.1.

9.4.22 *[Repealed – 1 March 2012]*

9.4.23 **To support the voluntary efforts of landholders in their management of the effects of poor quality groundwater on irrigated soils.**

Explanation

Communities using groundwater for irrigation need to be aware of the potential for soil degradation where that water is of poor quality, and manage their irrigation accordingly.

Principal reasons for adopting

This policy is adopted to ensure appropriate action is taken to avoid reduction of the productive capacity of soil resources for present and future generations, resulting from irrigation using poor quality groundwater.

9.5 Anticipated environmental results

9.5.1 *[Repealed – 1 March 2012]*

9.5.2 **Groundwater is protected from long term contamination caused by the leaching or direct entry of contaminants.**

9.5.3 *[Repealed – 1 March 2012]*

9.5.4 **The use of groundwater for irrigation does not result in the contamination of soils.**

Monitoring of the achievement of these anticipated environmental results will be carried out as outlined in Chapter 19.

10

Wetlands



10.1 Introduction *[Repealed – 1 October 2013]*

10.2 Issues *[Repealed – 1 October 2013]*

10.3 Objectives

- 10.3.1 Otago’s wetlands and their individual and collective values and uses will be maintained or enhanced for present and future generations.**
- 10.3.2 Otago’s Regionally Significant Wetlands and their values and uses are recognised and sustained.**

10.4 Policies

10.4.1 Otago’s regionally significant wetland values are:

- A1 Habitat for nationally or internationally rare or threatened species or communities;**
- A2 Critical habitat for the life cycles of indigenous fauna which are dependent on wetlands;**
- A3 High diversity of wetland habitat types;**
- A4 High degree of wetland naturalness;**
- A5 Wetland scarce in Otago in terms of its ecological or physical character;**
- A6 Wetland which is highly valued by Kai Tahu for cultural and spiritual beliefs, values and uses, including waahi taoka and mahika kai;**
- A7 High diversity of indigenous wetland flora and fauna;**
- A8 Regionally significant wetland habitat for waterfowl; and**
- A9 Significant hydrological values including maintaining water quality or low flows, or reducing flood flows.**

10.4.1A A Regionally Significant Wetland is any wetland that is:

- (a) Listed in Schedule 9 and mapped in maps F1-F63; or**
- (b) Within a wetland management area listed in Schedule 9 and mapped in maps F1-F63; or**
- (c) Higher than 800 metres above sea level.**

10.4.2 Avoid the adverse effects of an activity on a Regionally Significant Wetland or a regionally significant wetland value, but allow remediation or mitigation of an adverse effect only when the activity:

- (a) Is lawfully established; or**
- (b) Is nationally or regionally significant ~~important~~ infrastructure, and has specific locational constraints; or**

Part H:
Nationally or
regionally
important
infrastructure

- (c) **Has the purpose of maintaining or enhancing a Regionally Significant Wetland or a regionally significant wetland value.**

10.4.2A Where the avoidance, remediation or mitigation of adverse effects on any Regionally Significant Wetland or any regionally significant wetland value is not adequate, financial contributions, determined in accordance with Chapter 17, may be required.

10.4.3 *[Repealed – 1 October 2013]*

10.4.4 *[Repealed – 1 October 2013]*

10.4.5 *[Repealed – 1 October 2013]*

10.4.6 To promote the conservation, creation and reinstatement of wetland areas and enhancement of individual and collective wetland values by:

- (a) **Educating Otago’s people and communities about land use activities that may affect wetlands and their values;**
- (b) **Promoting the fencing of wetlands;**
- (c) **Initiating or supporting investigations and monitoring of wetlands and their values;**
- (d) **Supporting voluntary community and landholder programmes;**
- (e) **Initiating or undertaking works in consultation with local communities;**
- (f) **Providing information on wetlands and their values; or**
- (g) **Providing for the restoration or enhancement of wetlands and wetland values.**

10.4.7 *[Repealed – 1 October 2013]*

10.5 Anticipated Environmental Results *[Repealed – 1 October 2013]*

W E T L A N D S

Plan Change 7

10A

Objective, Policies & Rules for Replacement Water Take & Use Permits



10A.1 Objective

10A.1.1 Transition toward the long-term sustainable management of surface water resources in the Otago region by establishing an interim planning framework to manage new water permits, and the replacement of deemed permits and water permits to take and use surface water (including groundwater considered as surface water) where those water permits expire prior to 31 December 2025, until the new Land and Water Regional Plan is made operative.

10A.2 Policies

10A.2.1 Irrespective of any other policies in this Plan, avoid granting resource consents that replace deemed permits, or water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, except where:

- (a) The deemed permit or water permit that is being replaced is a valid permit; and
- (b) There is no increase in the area under irrigation, if the abstracted water is used for irrigation; and
- (c) There is no increase in the instantaneous rate of abstraction; and
- (d) Any existing residual flow, minimum flow or take cessation condition is applied to the new permit; and
- (e) There is a reduction in the volume of water allocated for abstraction.

10A.2.2 Irrespective of any other policies in this Plan concerning consent duration, only grant new resource consents for the take and use of water for a duration of no more than six years.

10A.2.3 Irrespective of any other policies in this Plan concerning consent duration, only grant new resource consents that replace deemed permits, or resource consents that replace water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, for a duration of no more than six years, except where Rule 10A.3.2.1 applies and:

- (a) The activity will have no more than minor adverse effects (including no more than minor cumulative effects) on the ecology and the hydrology of the surface water body (and any connected water body) from which the abstraction is to occur; and
- (b) The resource consent granted will expire before 31 December 2035.

10A.3 Rules

10A.3.1 Controlled activity: Resource consent required

10A.3.1.1 Despite any other rule or rules in this Plan;

- a) any activity that is currently authorised under a Deemed Permit; or
- b) the take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is currently authorised by an existing water permit where that water permit expires prior to 31 December 2025;

is a ***controlled*** activity provided the following conditions are met:

- (i) The consent duration sought is no more than six years; and
- (ii) The deemed permit or water permit that is being replaced is a valid permit; and
- (iii) The application demonstrates that the total land area under irrigation does not exceed that irrigated in the 2017-2018 irrigation season, if the abstracted water is used for irrigation; and
- (iv) The rate of take shall be no more than the average maximum rate of take limit recorded during the period 1 July 2012 – 30 June 2017 and calculated in accordance with the method in Schedule 10A.4; and
- (v) Any existing residual flow, minimum flow, or take cessation condition (whichever is applicable) is included in the application for resource consent; and
- (vi) The volume of water taken shall be no more than the average maximum of the daily volume limit, or monthly volume limit, or annual volume limit (whichever one or more are applicable) recorded during the period 1 July 2012 – 30 June 2017, and calculated in accordance with the method in Schedule 10A.4.

- (a) Intake method and flow rate controls to avoid or mitigate fish entrainment; and
- (b) The volume and rate of water taken, dammed, discharged or diverted, and the timing and frequency of the take or damming or diversion or discharge; and
- (c) Efficiency of water use and how that efficiency is to be sustained for the duration of the water permit; and
- (d) Provision of fish passage; and
- (e) The rules or operating procedures of any relevant water allocation committee that exists for the catchment; and
- (f) Minimum flow, residual flow or take cessation conditions; and
- (g) Review conditions; and
- (h) Compliance monitoring; and
- (i) The point and method of measurement and the method for transmitting recorded data to Council.

Pursuant to sections 95A and 95B of the RMA, an application for resource consent under this rule will be processed and considered without public or limited notification. Limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under Section 95B(3) of the RMA.

Advice Note: *If the application is for a new water permit (and not the replacement of a deemed permit or replacement of an expiring water permit) refer to the rules in Chapter 12 of this Plan.*

10A.3.2 Non-complying activity: Resource consent required

10A.3.2.1 Despite any other rule or rules in this Plan:

- a) any activity that is the replacement of an activity authorised under a Deemed Permit; or
- b) the take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is the replacement of a take and use authorised by an existing water permit where that water permit expires prior to 31 December 2025;

that does not meet any one or more of the conditions of Rule 10A.3.1.1 is a **non - complying** activity.

10A.4 Schedule: Methodology for calculating assessed actual usage for surface-water takes for irrigation purposes

10A.4.1 Methodology for calculating ‘Rate of Take Limit’

The ‘Rate of Take Limit’ (litres per second – L/s) shall be determined by calculating the Average Maximum of the actual rate taken. In order to achieve this, the actual rate taken across the hydrological year (1 July to 30 June) will be analysed to determine the maximum rate taken at any time during that year. The maximum rate taken in each hydrological year will then be summed and divided by the number of years analysed.

Methodology

- (1) Where a water meter records the volume of water taken over a fixed period of time, the rate of take will be calculated by converting the volume taken in litres by the interval recorded by the meter. For example, 10 m³ taken over a 15-minute period will equate to a rate of take of 11.11 l/s.
- (2) Any measurement that is at or below 0 l/s will be removed.
- (3) Any measurement that exceeds the authorised (consented) rate by less than the margin of error of the water meter is rounded down to the authorised rate.
- (4) Any measurement that exceeds the authorised rate of take by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:
 - a) Abstracting above the consented rate of take, and
 - b) errors caused by faulty equipment, and
 - c) abstraction rates that are high due to natural events such as floods.
- (5) The margin of error to be applied to any calculation will be either 5% or 10% depending on:
 - a) the margin of error specified in any consent or permit being replaced, or
 - b) the results of the last verification presented to the Otago Regional Council, or
 - c) the margin of error specified by the meter’s manufacturer.
- (6) The maximum rate taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

10A.4.2 Methodology for calculating Daily Volume Limit (m3)

The ‘Daily Volume Limit’ shall be determined by calculating the Average Maximum of the actual ‘Daily Volume’ taken. In order to achieve this, the maximum ‘Daily Volume’ taken on any day in each water year (1 July to 30 June) will be calculated. The maximum ‘Daily Volume’ in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

Methodology

(1) Where a consent being replaced does not include a ‘Daily Volume Limit’, the authorised volume will be calculated based on the following formula:

$$\text{Daily Volume m}^3 = ((\text{Consented Rate of Take l/s}) \times 86,400) / 1,000$$

(2) Any measurement that is at, or below, 0 m3 will be removed.

(3) Any day that exceeds the authorised (consented) or calculated daily volume by less than the margin of error on the water meter is rounded down to the consented volume.

(4) Any day where the volume taken exceeds the authorised (consented) or calculated volume by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:

- a) overtaking outside of existing authorised limits, and
- b) errors caused by faulty equipment, and
- c) overtaking caused by natural events such as floods.

(5) The margin of error will be treated as being either 5% or 10% depending on:

- a) the margin of error specified in any consent or permit being replaced,
or
- b) the results of the last verification presented to the Otago Regional Council, or
- c) the margin of error specified by the meter’s manufacturer.

(f) The maximum ‘Daily Volume’ taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

10A.4.3 Methodology for calculating Monthly Volume Limit (m3)

The ‘Monthly Volume Limit’ shall be determined by calculating the Average Maximum of the actual ‘Monthly Volume’ taken. In order to achieve this, the maximum ‘Monthly Volume’ taken in any month in each water year (1 July to 30 June) will be calculated. The maximum ‘Monthly Volume’ in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

Methodology

- (1) Where a consent being replaced does not include a ‘Monthly Volume Limit’ the authorised volume will be calculated based on the following formula:

$$\text{Monthly Limit} = \frac{\text{Consent Daily Volume or Calculated Daily Volume}}{\text{x 30.4}}$$

- (2) Actual Monthly volumes will be calculated based on the sum of the assessed Daily Volumes in each calendar month. For the purposes of this calculation Daily Volumes will be filtered using the same steps used when calculating the Maximum Daily Volume.
- (3) Any measurement that is at, or below, 0 m3 will be removed.
- (4) Any month where the volume taken exceeds the authorised or calculated volume by less than the margin of error on the water meter is rounded down to the consented volume.
- (5) Any month where the volume taken exceeds the authorised or calculated volume by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:
- a) overtaking outside of existing authorised limits, and
 - b) errors caused by faulty equipment, and
 - c) overtaking caused by natural events such as floods.
- (6) The margin of error to be applied to any calculation will be either 5% or 10% depending on:
- a) the margin of error specified in any consent or permit being replaced,
or
 - b) the results of the last verification presented to the Otago Regional Council, or
 - c) the margin of error specified by the meter’s manufacturer.
- (7) The maximum ‘Monthly Volume’ taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

10A.4.4 Methodology for calculating Annual Volume Limit (m3)

The 'Annual Volume Limit' shall be determined by calculating the average of the actual volumes taken each year.

Methodology

- (1) Where a consent or permit being replaced does not include an 'Annual Volume Limit' the authorised volume will be calculated based one of the following formula. The formula used will be whichever produces the lower calculated Annual Limit;

$$\text{Annual Limit} = \frac{(\text{Consent Daily Volume or Calculated Daily Volume}) \times 365.25}{}$$

$$\text{Annual Limit} = (\text{Consented Monthly Volume}) \times (\text{Months where water can be taken})$$

Where the consent or permit being replaced specifies the months during which water can be taken, a count of those months will be used. Where the consent or permit being replaced does not specify the months during which water can be used the number used will be 12.

- (2) Actual Annual volumes will be calculated based on the sum of the assessed Daily Volumes in each water year. For the purposes of this calculation Daily Volumes will be filtered using the same steps used when calculating the Maximum Daily Volume.
- (3) Any measurement that is at or below 0 m3 will be removed.
- (4) Any year that exceeds the authorised or calculated volume is rounded down to the authorised volume.
- (5) The 'Annual Volume' taken in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

11

Introduction to the Rules



11.1 Introduction

11.1.1 Content

The three chapters following this contain rules regulating the use of Otago's water and land resources in order to achieve the objectives of this Plan. The rules determine the status of any particular activity hence whether a resource consent is required for that activity to be carried out, and may specify whether the resource consent application needs to be notified.

The guide to the rules section introduces the terminology used in the rules and indicates those types of activity which require a resource consent. Notification of resource consents and consent conditions are also briefly discussed.

This chapter also contains an index to the Regional Plan: Water rules (see Table 2) and an outline of this Plan's relationship to district plans and other regional plans. A proposed activity may require consent under these plans. There may also be obligations that have to be met under other legislation, which this Plan does not replace or override. Some of this legislation is listed in section 11.3.1 of this chapter.

11.1.2 Rationale

The following activities can occur only if they are expressly allowed by a rule in a regional plan, or in any relevant proposed regional plan or by a resource consent (Sections 13(1), 14 and 15 of the Resource Management Act 1991):

- The use of water;
- The taking of water;
- The damming or diversion of water;
- The discharge of water into water; or
- The discharge of contaminants into water or onto or into land in circumstances which may result in that contaminant entering water;

and, in respect of the bed of any lake or river:

- The use, erection, placement, alteration, reconstruction, extension, removal or demolition of structures;
- Any bed disturbance;
- The introduction of vegetation;
- The deposition of any substance; and
- Any drainage or reclamation.

Under Sections 9(3) and 13(2) of the Resource Management Act 1991, no person may use any land in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use. This Plan includes rules to control the effects of particular land uses on Otago's water resource.

11.1.3 Guide to using this chapter

An activity may need to comply with more than one rule in this Plan so it is essential all relevant rules in Chapters 12, 13 and 14 be examined. Table 2 provides a guide to find the relevant rules for any particular activity. Once the status of a proposed activity is determined from the rules, Figure 4 can be used to find out whether resource consent is required.

11.2 Guide to the rules

11.2.1 Status of activities

The rules within this Plan determine the status of any particular activity and whether a resource consent is required for that activity to be carried out. Each of the rules specify whether a particular activity is:

- Permitted;
- Controlled;
- Discretionary;
- Non-complying; or
- Prohibited.

These classes of activity are described below. Figure 4 illustrates the difference between these classes and which require resource consents.

11.2.1.1 Permitted activity: No resource consent required

Activities specified as permitted activities within the rules of this Plan can occur without the need to obtain a resource consent, provided they comply with the conditions stated in the rule.

11.2.1.2 Controlled activity: Resource consent required but always granted

Activities specified as controlled activities within the rules of this Plan are activities which require a resource consent from the Otago Regional Council, but which will always be granted by the Council. The application for a resource consent will be assessed according to specified matters over which the Council will exercise its control. The resource consent may include conditions relating to these matters.

11.2.1.3 Discretionary activity: Resource consent required

Activities specified as discretionary activities within the rules of this Plan are activities which require a resource consent from the Otago Regional Council, but which the Council has retained its discretion as to whether it will grant the resource consent. The Council will, in considering any application for a discretionary activity, be guided by the objectives and policies contained within this Plan, the Regional Policy Statement for Otago, and the requirements of the Resource Management Act 1991. Conditions may be included on any resource consent granted.

Two types of discretionary activity exist, with the rules specifying which of these two discretionary activities applies in each case:

(a) **Restricted discretionary activities**

Restricted discretionary activities are those for which the Otago Regional Council has restricted the exercise of its discretion. This means that the Council limits the range of matters it considers and only sets conditions (if the resource consent is granted) that are relevant to the matters to which it has restricted its discretion. The relevant rules of this Plan list these matters.

(b) **Discretionary activities**

Discretionary activities are those for which the Otago Regional Council retains full discretion. The Council will exercise its discretion in accordance with the relevant policies of this Plan. If the resource consent is granted the Council may set any conditions that fall within the Council's powers under Section 108 of the Resource Management Act.

11.2.1.3A Non-complying activities: Resource consent required

Activities specified as non-complying within the rules of this Plan are activities which require a resource consent from the Otago Regional Council, but which the Council may grant or decline the resource consent. The Council will, in considering any application for a non-complying activity, need to be satisfied that the effects of the activity on the environment will be minor or the activity will not be contrary to the objectives and policies of the Plan and any proposed Plan in respect of the activity. Conditions may be included on any resource consent granted.

11.2.1.4 Prohibited activity: No resource consent will be granted

Activities specified as prohibited activities within the rules of this Plan may not occur in Otago and no resource consent shall be granted for these activities.

The definitions of these terms are consistent with the meaning given to them in the Resource Management Act. The Resource Management Act definitions of these terms are contained in the Glossary.

11.2.2 Notification of resource consents

Any resource consent application received by the Otago Regional Council must be **publicly notified** under Section 93 of the Act, unless provided for by Section 93(1), 94(1) or 94D. Public notification allows the community to be involved in assessing whether the proposed activity may cause adverse effects.

Some rules in this Plan expressly permit consideration of a resource consent application **without public notification** in accordance with Section 94D. An application may be notified even when rules in this Plan state that it may be non-

notified, if the Council considers special circumstances exist, or if the applicant requests.

If the Council is satisfied that:

- The adverse effects of the proposed activity on the environment will be minor; and
- Every person who may be adversely affected by the activity has given written approval to the activity,

the application **may not be notified**. An application will be notified if the applicant requests, or the Council considers there are special circumstances.

If the Council is satisfied that:

- The adverse effects of the proposed activity on the environment will be minor; but
- All persons who may, in the opinion of the Council, be adversely affected by the activity have not given their written approval,

then notice of the application **may be served** on all persons who may be adversely affected, whether they have given their written approval or not. The application may not be publicly notified. However, the rules in this Plan may provide that notice for an application for resource consent for a controlled or restricted discretionary activity may not need to be served on affected persons.

11.2.3 Resource consent conditions

In granting a resource consent, the Otago Regional Council may include conditions on the consent in accordance with Section 108 of the Resource Management Act. Conditions can be used to ensure that any actual or potential effects of the activity on the environment are avoided, remedied or mitigated.

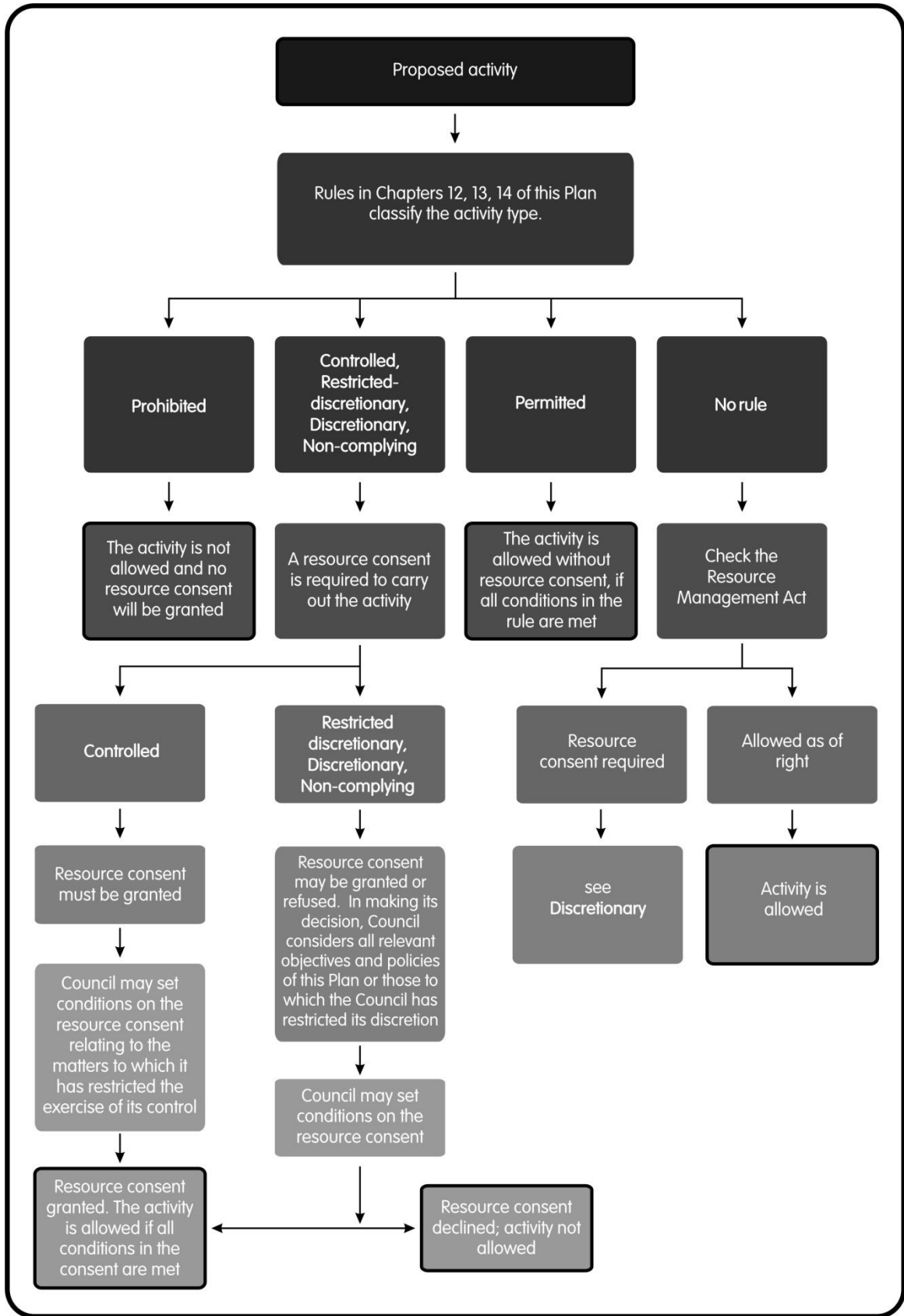


Figure 4: Key steps to determine whether a proposed activity is allowed

11.2.4 Index to the rules

Table 2 provides a guide to find the relevant rules for any particular activity.

Table 2: Index to Regional Plan: Water rules

If the activity involves any of the following	See the following rules of the Plan	
<i>Water use and management</i>		
Applications to take water	12.0	Applications to take surface water and groundwater
The taking of:		
• Surface water	12.1	The taking and use of surface water
• Groundwater	12.2	The taking and use of groundwater
• The damming or diversion of water	12.3	The damming or diversion of water
<i>The discharge of water or contaminants, in terms of:</i>		
• Human Sewage	12.A	Discharge of human sewage
• Hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams	12.B	Discharge of hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams
• Other discharges	12.C	Other discharges
A wetland identified in Schedule 9 or any wetland above 800 metres in altitude	12.1–12.3 12.A–12.C	Activities affecting water
<i>Land use on lake or river beds or Regionally Significant Wetlands</i>		
Structures	13.1 13.2 13.3 13.4	The use of a structure The erection or placement of a structure The repair, maintenance, extension, alteration, replacement or reconstruction of a structure Demolition or removal of a structure
Disturbance	13.5	Alteration of the bed of a lake or river, or of a Regionally Significant Wetland
Reclamation		
Deposition of substances		
<i>Vegetation:</i>		
• Introduction of vegetation to the bed of a lake or river, or of a Regionally Significant Wetland	13.6	The introduction or planting of vegetation
• Removal of vegetation from the bed of a lake or river, or of a Regionally Significant Wetland	13.7	The removal of vegetation
<i>Land use other than in lake or river beds</i>		
The construction of a bore	14.1	Bore construction
Drilling	14.2	Drilling
Defences against water	14.3	The erection, placement, extension, alteration, replacement, reconstruction, demolition or removal of a defence against water
Structures other than defences against water	14.4	Structures other than defences against water
<i>Plantation forestry</i>		
Discharges to water or to land in circumstances that may end up in water	12.C	Other Discharges
Disturbance of a river bed	13.5	Alteration of the bed of a lake or river, or of a Regionally Significant Wetland

Rules that apply to plantation forestry	Schedule 17 Schedule of rules that apply to plantation forestry in Otago
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Note: District Plans may also have rules relating to these activities.

Although important, rules are not the only means of achieving the objectives of this Plan. Chapter 15 details methods other than rules that are intended to be used in this regard.

11.3 Relationship to other legislation and plans

11.3.1 Other legislation

Other legislation may have implications for the management of Otago water resources. This Plan does not replace or override that legislation, and nothing in these rules removes obligations under any other legislation, including the:

- Soil Conservation and Rivers Control Act 1941;
- Historic Places Trust Act 1993;
- Conservation Act 1987 and related legislation;
- Freshwater Fisheries Regulations 1983;
- Lake Wanaka Preservation Act 1973;
- Ngai Tahu Claims Settlement Act 1998;
- Local Government Acts 1974 and 2002;
- Biosecurity Act 1993;
- Building Act 2004, the Building Code and relevant Building Regulations;
- Health Act 1956;
- Transit New Zealand Act 1989;
- Crown Minerals Act 1991;
- Hazardous Substances and New Organisms Act 1996 and related regulations; and
- Trespass Act 1980.

11.3.1A Water conservation orders

Water permits or discharge permits granted under this Plan must be consistent with any relevant water conservation order. Those operative in Otago include:

- The Water Conservation (Kawarau River) Order 1997; and
- The Water Conservation (Mataura River) Order 1997.

11.3.2 District plans

District plans may also have rules dealing with the activities regulated by the rules in this Plan. District plans regulate subdivision and the effects of land use activities, including activities on the surface of water bodies. Nothing in this Plan affects any requirement for compliance with a district plan.

11.3.3 Regional plans

Other operative regional plans deal with air, the coast and waste. These plans also establish permitted activities or require resource consents for certain activities. The provisions of this Plan are in addition to the requirements of any other regional plan.

11.3.3.1 Regional Plan: Air

Consents may be required under the Regional Plan: Air for the following activities:

- Domestic heating;
- Burning of waste;
- Discharges from industrial or trade premises;
- Abrasive blasting;
- Discharges from factory farming;
- Discharges of agrichemicals; and
- Discharges of water vapour, heat and energy.

This Regional Plan: Water also deals with the discharge of some of the above contaminants, but only where they are discharged to water or land in circumstances which may result in a contaminant entering water.

11.3.3.2 Regional Plan: Coast

This Regional Plan: Water does not consider activities in the coastal marine area (from the line of mean high water springs out to 12 nautical miles). The line between the resources managed under this Plan and those managed under the Regional Plan: Coast, where a water body enters the coastal marine area, is shown in Schedule 12 of this Plan.

11.3.3.3 Regional Plan: Waste

Consents may also be required under the Regional Plan: Waste for the following activities:

- The discharge of hazardous wastes;
- The disturbance of land at contaminated sites;
- The operation of facilities for the treatment or disposal of hazardous wastes;
- The discharge of oil or substances containing oil as a dust suppressant on formed roads;
- The discharge of contaminants from landfills (including farm landfills, cleanfill landfills, greenwaste landfills and offal pits); and
- The discharge of contaminants from composting and silage production.

INTRODUCTION TO THE RULES

12

Rules: Water Take, Use and Management



12.0 Applications for taking water

12.0.1 Prohibited activity: No resource consent will be granted

12.0.1.1 An application to take water within primary allocation in a catchment where Policy 6.4.2(b) applies, by a person who does not hold the existing consent to take that water, is a **prohibited** activity.

12.0.1.2 An application to take water as primary allocation where that take would cause the primary allocation of a catchment to exceed the relevant limit in Policy 6.4.2, is a **prohibited** activity.

12.0.1.3 The application to take groundwater for a consumptive use by a person who does not hold the existing resource consent to take that water, from an aquifer identified in Schedule 4A, where the assessed maximum annual take:

- (i) Exceeds the aquifer's maximum allocation limit; or
- (ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a **prohibited** activity, unless all of the water taken:

- (1) Is allocated as surface water under Policy 6.4.1A; or
- (2) Is taken for temporary dewatering at a site for construction or repair of a structure.

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

12.0.1.4 *[Repealed – 1 September 2015]*

12.1 The taking and use of surface water

12.1.1 Prohibited activities: No resource consent will be granted

12.1.1.1 The taking and use of surface water from Lake Tuakitoto when the level of the lake is below 100.77 metres above datum, during the period beginning 30 September in any year and ending 16 May in any following year, is a **prohibited** activity for which no resource consent will be granted.

12.1.1.2 The taking and use of surface water for nuclear power generation or nuclear weapon manufacturing is a **prohibited** activity for which no resource consent will be granted.

12.1.1A Non-complying activities: Resource consent required

12.1.1A.1 The taking and use of surface water within any Regionally Significant Wetland is a *non-complying* activity unless:

- (i) It is prohibited by Rules 12.1.1.1 or 12.1.1.2; or
- (ii) It is permitted by Rules 12.1.2.1, 12.1.2.3, or 12.1.2.6.

An application involving wind energy infrastructure, which because of specific locational constraints affects a Regionally Significant Wetland, will not be bundled with other activities which do not affect a Regionally Significant Wetland.

12.1.1A.2 Except as provided for by Rules 12.1.1.2 to 12.1.5.1 and 12.1.1A.3, the taking and use of surface water in the Waitaki catchment when, by itself or in combination with any other take, use, dam or diversions, the sum of the annual volumes authorised by resource consent, exceeds the allocations to activities set out in Rules 12.1.4.5 to 12.1.4.7 is a *non-complying* activity.

In considering an application to which this rule applies the consent authority will have regard, among other matter to Policies 6.6A.1 to 6.6A.5.

12.1.1A.3 Except as provided for by Rules 12.1.1.2 and 12.1.1A.1, the taking and use of surface water from Welcome Creek is a *non-complying* activity when:

- (i) By itself or in combination with any other take, use, dam or diversions, the sum of the annual volumes authorised by resource consent, exceeds the allocations to activities set out in Rule 12.1.4.2; and
- (ii) The take does not comply with the minimum flow specified in Schedule 2A.

In considering an application to which this rule applies the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.6.

12.1.2 Permitted activities: No resource consent required

12.1.2.0 The use of surface water for the purpose specified under an existing resource consent to take surface water, granted before 10 April 2010, is a *permitted* activity until the existing resource consent to take surface water:

- (a) Lapses, is surrendered or expires; or
- (b) Is replaced; or
- (c) Is varied under Section 127 of the Act; or
- (d) Is transferred under Section 136 (2)(b)(ii) of the Act.

12.1.2.1 The taking and use of surface water for domestic needs or the needs of animals for drinking water is a *permitted* activity providing:

- (a) No take is for a volume greater than 25,000 litres per day; and
 - (b) No take is at a rate greater than 0.5 litres per second in the North Otago, Maniototo or Central Otago subregions (as identified on Maps A1-A8), or greater than 1 litre per second elsewhere in Otago; and
 - (c) The taking or use does not have an adverse effect on the environment.
- 12.1.2.2 Except as provided for by Rules 12.1.1A.1 and 12.1.1.2, the taking and use of surface water from the main stem of the Clutha/Mata-Au or Kawarau Rivers, or Lakes Wanaka, Hawea, Wakatipu, Dunstan or Roxburgh, is a *permitted* activity, providing:
- (a) The take does not exceed 100 litres per second, nor 1,000,000 litres per day; and
 - (b) No more than one such take occurs per landholding; and
 - (c) No back-flow of any contaminated water occurs to the water body; and
 - (d) Fish are prevented from entering the intake structure.
- 12.1.2.3 Except as provided for by Rule 12.1.1.2, the taking and use of surface water from any artificial lake is a *permitted* activity providing:
- (a) The artificial lake was created under Rule 12.3.2.1 or under the Transitional Regional Plan rule constituted by General Authorisation 13, prior to 28 February 1998; and
 - (b) The water is taken by the owner of the dam structure, or the take is authorised by that owner.
- 12.1.2.4 Except as provided for by Rules 12.1.1.1 to 12.1.2.3, the taking and use of surface water for no more than 3 days in any one month, is a *permitted* activity, providing:
- (a) The water is not used for irrigation; and
 - (b) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
 - (c) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
 - (d) No lawful take of water is adversely affected as a result of the taking; and
 - (e) No take is for a volume greater than 100,000 litres per day; and
 - (f) No take is at a rate greater than 10 litres per second; and
 - (g) No back-flow of any contaminated water occurs to the water body; and
 - (h) Fish are prevented from entering the intake structure; and

- (i) The taking of surface water is not suspended.

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water as primary allocation, under a resource consent has had to cease in accordance with Rule 12.1.4.9, for the catchment or river, or part of the catchment or river, at which the taking of water under this rule is occurring.

- 12.1.2.5 Except as provided for by Rules 12.1.1.1 to 12.1.2.4, the taking and use of surface water is a *permitted* activity, providing:

- (a) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (b) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (c) No lawful take of water is adversely affected as a result of the taking; and
- (d) No take is for a volume greater than 25,000 litres per day at any landholding; and
- (e) No take is at a rate greater than 0.5 litres per second in the North Otago, Maniototo or Central Otago subregions (as identified on Maps A1-A8), or greater than 1 litre per second elsewhere in Otago; and
- (f) No back-flow of any contaminated water occurs to the water body; and
- (g) Fish are prevented from entering the intake structure; and
- (h) The taking of surface water is not suspended.

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water as primary allocation, under a resource consent has had to cease in accordance with Rule 12.1.4.9, for the catchment or river, or part of the catchment or river, at which the taking of water under this rule is occurring.

- 12.1.2.6 Unless prohibited by Rules 12.1.1.1 or 12.1.1.2, the taking of surface water for the purpose of land drainage is a *permitted* activity, providing:

- (a) Any taking within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and
- (b) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (c) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (d) The taking does not result in the lowering of the level of water in any lake or river; and

- (e) The taking does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.1.3 Controlled activity: Consent required but always granted

- 12.1.3.1 Unless covered by Rule 12.1.1A.1, the taking and use of surface water for community water supply, up to any volume or rate authorised as at 28 February 1998, by any take identified in Schedule 1B is a *controlled* activity.

In granting any resource consent for the taking and use of surface water in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) Any need for a residual flow at the point of take; and
- (b) Any need to prevent fish entering the intake; and
- (c) The rate, volume, timing and frequency of the water to be taken and used; and
- (d) The quantity of water required to meet the needs of the community; and
- (e) The proposed method of take and delivery of the water taken; and
- (f) The duration of the resource consent; and
- (g) The information and monitoring requirements; and
- (h) Any bond; and
- (i) The review of conditions of the resource consent; and
- (j) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.1.4 Restricted discretionary activities: Resource consent required

- 12.1.4.1 Except as provided for by Rule 12.1.2.3, the taking and use of surface water from any lake or river which has already been delivered to that lake or river for the purpose of this subsequent taking is a *restricted discretionary* activity.

In considering any resource consent for the taking and use of water in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) The amount of water which can be taken, having regard to the amount delivered to the lake or river and any losses that may have occurred between the point of augmentation and the take; and
- (b) Any need to prevent fish entering the intake; and

- (c) The duration of the resource consent; and
- (d) The information and monitoring requirements; and
- (e) Any bond; and
- (f) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

Note:

Rules 12.1.4.2 to 12.1.4.7 below do not apply to the taking of surface water prohibited by rules in 12.0, or provided for by permitted and controlled activity rules in 12.1.2 and 12.1.3 above.

For taking water:

1. *From Lakes Dunstan, Hawea, Roxburgh, Wanaka, Wakatipu or the main stem of the Clutha/Mata-Au or Kawarau Rivers; or*
2. *Where all of the surface water or connected groundwater taken is immediately returned to the source water body; or*
3. *Where all of the water has been delivered to the source water body for the purpose of that subsequent take:*

Any take which does not meet the permitted activity standards is considered under Rules 12.1.4.1, 12.1.5.1 or in Section 12.1.1A, as it is exempt from primary allocation in accordance with Policy 6.4.1.

12.1.4.2 Taking and use of surface water as primary allocation in the following Schedule 2A catchment areas, shown on the B-series maps:

Kakanui,
 Lake Hayes,
 Lake Tuakitoto,
 Pomahaka,
 Shag,
 Taieri Catchment upstream of Paerau,
 Taieri Catchment Sutton to Outram,
 Trotters,
 Waianakarua,
 Waitahuna,
 Waiwera,
 Water of Leith, and
 Welcome Creek:

- (i) This rule applies to the taking of surface water, as primary allocation, in the above catchment areas, and subject to the minimum flows specified in Schedule 2A.

- (ii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a **restricted discretionary** activity, provided that, in the case of Welcome Creek, by itself or in combination with any other take, use, dam, or diversion, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2.
- (iii) The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iv) The conditions of all existing consents will be reviewed by the Otago Regional Council under Sections 128 to 132 of the Act to enable the minimum flows specified in Schedule 2A to be met, the volume and rate of take to be measured in accordance with Policy 6.4.16 and the taking to be subject to Rule 12.1.4.9, as soon as practicable after the Plan becomes operative.

Table 12.1.4.2

Annual allocation to activities

Note: units = millions of m³ per year

	Town and Community water supply	Industrial and commercial activities (outside municipal or town supply areas)	Tourism and recreational facilities	Agricultural and horticultural activities	Any other activities*	Hydro-electricity generation*
Downstream of Waitaki Dam but downstream of Black Point	19	8.5	4.3	1100	144	All other flows except the flows that must remain in the rivers, pursuant to the environmental flow and level regimes

* Water taken or diverted and returned to the same water body in the vicinity of the take or diversion point, in the same condition and quality as taken, for fisheries and wildlife or micro hydro-electricity generation, does not need to be accounted for in the annual allocation to activities in Table 12.1.4.2.

12.1.4.3 Taking and use of surface water as supplementary allocation specified in Schedule 2B:

- (i) This rule applies to the taking of surface water as supplementary allocation as specified in Schedule 2B, subject to the minimum flows specified in Schedule 2B.
- (ii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a **restricted discretionary** activity. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.

- (iii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water in the Waitaki catchment to which this rule applies is a **restricted discretionary** activity provided that by itself or in combination with any other take, use, dam, or diversion, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2 and is subject to Rule 12.1.4.9. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iv) The conditions of all existing consents will be reviewed by the Otago Regional Council under Sections 128 to 132 of the Act to enable the minimum flows set in Schedule 2A or Schedule 2B to be met, the volume and rate of take to be measured in accordance with Policy 6.4.16 and the taking to be subject to Rule 12.1.4.9, as soon as practicable after the Plan becomes operative.

12.1.4.4 Taking and use of surface water as primary allocation applied for prior to 28 February 1998 in the following Schedule 2A catchments, shown on the B-series maps:

- Luggate Catchment,
 Manuherikia Catchment Upstream of Ophir,
 Taieri Catchment Paerau to Waipiata,
 Taieri Catchment Waipiata to Tiroiti, and
 Taieri Catchment Tiroiti to Sutton:
- (i) This rule applies to the taking of surface water, as primary allocation, in the above catchment areas, if the taking was the subject of a resource consent or other authority:
 - (a) Granted before 28 February 1998; or
 - (b) Granted after 28 February 1998, but was applied for prior to 28 February 1998; or
 - (c) Granted to replace a resource consent or authority of the kind referred to in paragraph (a) or (b).
 - (ii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a **restricted discretionary** activity. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
 - (iii) The minimum flows set out in Schedule 2A of this Plan for the above catchments shall affect the exercise of every resource consent or other authority, of the kind referred to in paragraph (i) of this rule, in the Luggate catchment area, Manuherikia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata, Waipiata to Tiroiti and Tiroiti to Sutton, upon review of consent conditions.
 - (iv) The conditions of all such consents will be reviewed by the Otago Regional Council under Sections 128 to 132 of the Act

to enable the minimum flows set by Schedule 2A to be met, the volume and rate of take to be measured in accordance with Policy 6.4.16 and the taking to be subject to Rule 12.1.4.9.

- (v) The minimum flows set in Schedule 2A for the Luggate catchment area, Manuherikia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata, Waipiata to Tiroiti and Tiroiti to Sutton, shall not apply to any consents referred to in clause (i), paragraphs (a) to (c) of this rule until the review of consent conditions set out in clause (iv) of this rule occurs.

12.1.4.4A *[Repealed – 1 March 2012]*

12.1.4.5 Taking and use of surface water as primary allocation applied for prior to 28 February 1998 in catchments not listed in Schedule 2A:

- (i) This rule applies to the taking of surface water, as primary allocation, in catchment areas not listed in Schedule 2A, if the taking was the subject of a resource consent or other authority:
 - (a) Granted before 28 February 1998; or
 - (b) Granted after 28 February 1998, but was applied for prior to 28 February 1998; or
 - (c) Granted to replace a resource consent or authority of the kind referred to in paragraph (a) or (b).
- (ii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a ***restricted discretionary*** activity. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water in the Waitaki catchment to which this rule applies is a ***restricted discretionary*** activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iv) Takes to which this rule applies will not be subject to a minimum flow condition until the minimum flow has been determined by investigation and added to Schedule 2A by a plan change.

Note: If a minimum flow has been determined for a catchment previously not listed in Schedule 2A, and that minimum flow

has been set by a plan change, the catchment will then be listed in Schedule 2A and Rule 12.1.4.2 or Rule 12.1.4.4 will apply.

12.1.4.6 Taking and use of surface water as a new primary allocation take in catchment areas not listed in Schedule 2A:

- (i) This rule applies to the taking of surface water as primary allocation in catchment areas not listed in Schedule 2A, and not subject to Rule 12.1.4.5.
- (ii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a **restricted discretionary** activity. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iii) Unless covered by Rule 12.1.1A.1, the taking and use of surface water in the Waitaki catchment to which this rule applies is a **restricted discretionary** activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (iv) Minimum flows for catchments not listed in Schedule 2A will be set on a case-by-case basis such that any minimum flow set will allow the taking of water, while providing for the aquatic ecosystems and natural character of the catchment water bodies and the taking to be subject to Rule 12.1.4.9.
- (v) The minimum flows set on a case-by-case basis will continue to apply until investigations have established the appropriate minimum flow. The new minimum flow will be added to Schedule 2A by a plan change and Rule 12.1.4.2 or Rule 12.1.4.4 will then apply.

12.1.4.7 Taking and use of surface water as supplementary allocation in any catchment other than a Schedule 2B catchment:

- (i) This rule applies to the taking of surface water as supplementary allocation for any catchment area, except for any Schedule 2B catchment as set out in clause (ii) below, subject to the minimum flows set in paragraph (iii) below.
- (ii) This rule does not apply to the taking of any surface water that is in addition to the first supplementary allocation provided for by Schedule 2B, for any catchment area in Rule 12.1.4.3.
- (iii) The taking of surface water as supplementary allocation for any catchment is subject to a minimum flow which is not less than either:
 - (a) 50% of the natural flow at the point of take, or, if a

resource consent so provides, not less than 50% of the natural flow at a point specified in the resource consent;
or

- (b) The natural mean flow at the point of take, or, if a resource consent so provides, not less than the natural mean flow at a point specified in the resource consent, as the Otago Regional Council determines in granting a resource consent.
- (iv) Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a **restricted discretionary** activity, and is subject to Rule 12.1.4.9. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (v) Unless covered by Rule 12.1.1A.1, the taking and use of surface water in the Waitaki catchment to which this rule applies is a **restricted discretionary** activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2 and is subject to Rule 12.1.4.9. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.
- (vi) This rule shall affect the exercise of any resource consent which was either:
 - (a) Granted before 28 February 1998; or
 - (b) Granted after 28 February 1998 but was applied for prior to 28 February 1998,

for the taking of surface water where a condition on the consent requires the take to be suspended at a minimum flow higher than that which would be set by Schedule 2A.
- (vii) The conditions of all such resource consents will be reviewed under Sections 128 to 132 of the Act to enable the minimum flows in paragraph (iii)(a) or (iii)(b) of this rule to be met, the volume and rate of take to be measured in accordance with Policy 6.4.16 and the taking to be subject to Rule 12.1.4.9, as soon as practicable after the Plan becomes operative.

12.1.4.8 Restricted discretionary activity considerations

In considering any resource consent for the taking and use of water in terms of Rules 12.1.4.2 to 12.1.4.7 and 12.2.3.1A, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (i) The primary and supplementary allocation limits for the catchment; and
- (ii) Whether the proposed take is primary or supplementary allocation for the catchment; and

- (iii) The rate, volume, timing and frequency of water to be taken and used; and
- (iv) The proposed methods of take, delivery and application of the water taken; and
- (v) The source of water available to be taken; and
- (vi) The location of the use of the water, when it will be taken out of a local catchment; and
- (vii) Competing lawful local demand for that water; and
- (viii) The minimum flow to be applied to the take of water, if consent is granted; and
- (ix) Where the minimum flow is to be measured, if consent is granted; and
- (x) The consent being exercised or suspended in accordance with any Council approved rationing regime; and
- (xi) Any need for a residual flow at the point of take; and
- (xii) Any need to prevent fish entering the intake and to locate new points of take to avoid adverse effects on fish spawning sites; and
- (xiii) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (xiv) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and
- (xv) Any actual or potential effects on any groundwater body; and
- (xvi) Any adverse effect on any lawful take of water, if consent is granted, including potential bore interference; and
- (xvii) Whether the taking of water under a water permit should be restricted to allow the exercise of another water permit; and
- (xviii) Any arrangement for cooperation with other takers or users; and
- (xix) Any water storage facility available for the water taken, and its capacity; and
- (xx) The duration of the resource consent; and
- (xxi) The information, monitoring and metering requirements; and
- (xxii) Any bond; and
- (xxiii) The review of conditions of the resource consent; and
- (xxiv) For resource consents in the Waitaki catchment the matters in (i) to (xxiii) above, as well as matters in Policies 6.6A.1 to 6.6A.6.

Notification and written approvals

- (a) For applications for resource consent to which this Rule applies, to take and use water from a river, the Consent Authority is precluded from giving public notification, if the application is to take and use water from:
 - (i) A river for which a minimum flow has been set by or under this Plan; or
 - (ii) A river for which it is not necessary for the Council to consider whether, if consent is granted, the taking should be subject to a condition requiring a residual flow to remain in the river at the point of take, or a condition requiring other provision for native fish, other than a condition requiring fish screening.

Other applications for resource consent to take and use water from a river may be considered without notification as allowed by the Resource Management Act.

- (b) For applications for resource consent to which this rule applies, to take and use water from a water body other than a river, the Consent Authority is precluded from giving public notification.

12.1.4.9 The suspension of takes

It is a term of any taking of surface water under Rules 12.1.1A.1, 12.1.2.4, 12.1.2.5 and 12.1.4.2 to 12.1.4.7 that, when the flow is equal to or less than a minimum flow applied by or under these rules, the Council may, by public notice, suspend all taking to enable the minimum flow to be met.

For catchments that have access to flow information via the “Water Info” telephone service, the taking of water under those consents shall cease automatically (without notification by Council) when the flow is at or below the minimum set in Schedule 2A or 2B until the flow again exceeds the minimum flow specified in Schedule 2A or 2B.

For catchments or parts of catchments where there is no access to flow information via the “Water Info” telephone service, the Council will notify the consent holders in those catchments that the taking of water shall cease. The Otago Regional Council will suspend takes in these catchments, or parts of catchments, by public notification through public media (newspaper, radio, television) until further notice that taking can recommence.

12.1.5 Discretionary activities: Resource consent required

12.1.5.1 Except as provided for by Rules 12.1.1.1 to 12.1.4.7, the taking and use of surface water is a *discretionary* activity.

12.1.6 *[Moved to 12.1.1A – 1 October 2013]*

Principal reasons for adopting

The taking and use of water can only occur if it is expressly allowed by a rule in a regional plan, or in any relevant proposed regional plan, or by a resource consent (Section 14(3) of the Resource Management Act).

Rule 12.1.1.1 is adopted to prohibit takes of water from Lake Tuakitoto when the minimum level established by this Plan is in force. This rule continues the minimum lake level already established to protect the lake’s recreational and wildlife features by The Local Water Conservation (Lake Tuakitoto) Notice, 1991.

Rule 12.1.1.2 is adopted to provide for and be fully consistent with Policy 12.5.1 of the Regional Policy Statement for Otago. The rule prohibits all taking of surface water for use in nuclear power generation plants and in nuclear weapons manufacturing.

Rule 12.1.2.0 is adopted to permit the use of surface water taken under a resource consent granted prior to 10 April 2010.

The taking and use of surface water under Rules 12.1.2.1 to 12.1.2.6 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person taking water. These rules are adopted to enable access to resources while providing protection for those values and uses.

The taking and use of surface water for existing community water supply identified in Schedule 1B is a controlled activity in order that the needs of Otago’s communities can continue to be met.

Where surface water that is to be taken and used has been specifically supplied from an augmentation scheme, the Council only needs to consider what portion of that water is still available to be taken, and the quantity of water required for the intended purpose of use. Therefore the taking and use of water, delivered for the purpose of that subsequent taking, is a restricted discretionary activity.

The taking of surface water within the primary and supplementary allocation limits identified in this Plan will be subject to minimum flows which will protect aquatic ecosystems and natural character. As such, the Council has restricted the exercise of its discretion when considering applications for resource consents under Rules 12.1.4.1 and 12.1.4.2 to 12.1.4.7, to take and use water. Any other activity involving the taking and use of surface water is either a discretionary activity or a non-complying activity in order that any adverse effects can be assessed. Non-complying activity rules 12.1.1A.2 and 12.1.1A.3 were added to this Plan by the Waitaki Catchment Water Allocation Regional Plan.

12.2 The taking and use of groundwater

Note: The construction or alteration of any bore for taking groundwater requires a resource consent under Rule 14.1.1.

12.2.1 Prohibited activities: No resource consent will be granted

12.2.1.1 The taking and use of groundwater for nuclear power generation or nuclear weapon manufacturing is a *prohibited* activity for which no resource consent will be granted.

12.2.1.2 The taking and use of groundwater from within 100 metres of Lake Tuakitoto when the level of the lake is below 100.77 metres above datum, during the period beginning 30 September in any year and ending 16 May in any following year, is a *prohibited* activity for which no resource consent will be granted.

12.2.1A Non-complying activities: Resource consent required

12.2.1A.1 The taking of groundwater within any Regionally Significant Wetland is a *non-complying* activity unless:

- (i) It is prohibited by Rules 12.2.1.1. or 12.2.1.2; or
- (ii) It is permitted by Rules 12.2.2.1 or 12.2.2.3.

An application involving wind energy infrastructure, which because of specific locational constraints affects a Regionally Significant Wetland, will not be bundled with other activities which do not affect a Regionally Significant Wetland.

12.2.1A.2 Except as provided for by Rules 12.2.1.1 and 12.2.1A.1, the taking and use of groundwater in the Waitaki catchment when, by itself or in combination with any other take, use, dam or diversions, the sum of the annual volumes authorised by resource consent, exceeds the allocations to activities set out in Rule 12.2.4.1 is a *non-complying* activity.

In considering an application to which this rule applies the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.6.

12.2.1A.3 The taking of groundwater for a consumptive use by a person who does not hold the existing resource consent to take that water, from an aquifer not identified in Schedule 4A, where the assessed maximum annual take:

- (i) Exceeds the aquifer's maximum allocation limit; or
- (ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a *non-complying* activity, unless all of the water taken:

- (1) Is allocated as surface water under Policy 6.4.1A; or

- (2) Is taken for temporary dewatering at a site for construction or repair of a structure; or
- (3) Is taken from a rock formation having an average hydraulic conductivity of less than 1×10^{-5} metres per second, which is not an aquifer mapped in the C-series of this Plan, and is taken in connection with mineral extraction activities.

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

12.2.2 Permitted activities: No resource consent required

12.2.2.0 The use of groundwater for the purpose specified under an existing resource consent to take groundwater, granted before 10 April 2010, is a **permitted** activity until the existing resource consent to take groundwater:

- (a) Lapses, is surrendered or expires; or
- (b) Is replaced; or
- (c) Is varied under Section 127 of the Act; or
- (d) Is transferred under Section 136 (2)(b)(ii) of the Act.

12.2.2.1 The taking and use of groundwater for domestic needs or the needs of animals for drinking water is a **permitted** activity providing:

- (a) No take is for a volume greater than 25,000 litres per day; and
- (b) The taking or use does not have an adverse effect on the environment.

12.2.2.2 Except as provided for by Rules 12.2.1.1 to 12.2.2.1, the taking and use of groundwater is a **permitted** activity, providing:

- (a) No lawful take of water is adversely affected as a result of the taking; and
- (b) The water is not taken from any aquifer identified in Schedule 2C; and
- (c) The water is not taken from within 100 metres of any wetland, lake or river; and
- (d) *[Repealed – 1 March 2012]*
- (e) *[Repealed – 1 March 2012]*
- (f) The take is for a volume no greater than 50,000 litres per day, at any landholding, from the following aquifers:
 - (i) Lower Waitaki Plains Groundwater Protection Zone A (as identified on Maps C15 and C16); and

(ii) Inch Clutha Gravel (as identified on Maps C26 and C27); and

(g) Except as provided by Condition (f) above, the take is for a volume no greater than 25,000 litres per day, at any landholding, elsewhere in Otago; and

(h) No back-flow of any contaminated water occurs to the aquifer; and

(i) The taking of groundwater is not suspended.

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water, under a resource consent has had to cease in accordance with Rule 12.2.3.5, for the aquifer from which the taking of water under this rule is occurring.

12.2.2.3 The taking of groundwater for the purpose of down-hole pump testing is a *permitted* activity, providing:

(a) The take does not exceed 2,000,000 litres per day and is carried out for a period of no longer than three consecutive days; and

(b) No lawful take of water is adversely affected as a result of the taking.

12.2.2.4 Except as provided for by Rule 12.2.1.1, the taking and use of groundwater from within 100 metres of the main stem of the Clutha/Mata-Au or Kawarau Rivers, or from within 100 metres of Lakes Wanaka, Hawea, Wakatipu, Dunstan or Roxburgh, is a *permitted* activity, providing:

(a) The take does not exceed 100 litres per second, nor 1,000,000 litres per day; and

(b) No more than one such take occurs per landholding; and

(c) No back-flow of any contaminated water occurs to the water body; and

(d) The take is not within 100 metres of any wetland or other lake or river; and

(e) No lawful take of water, and no wetland or other lake or river, is adversely affected as a result of the taking.

12.2.2.5 Except as provided for by Rules 12.2.1.1 to 12.2.2.4, the taking and use of groundwater from:

(i) Any aquifer listed in Schedule 2C; or

(ii) Within 100 metres of any wetland, lake or river,

for no more than 3 days in any one month, is a *permitted* activity, providing:

(a) The water is not used for irrigation; and

(b) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and

- (c) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (d) No lawful take of water is adversely affected as a result of the taking; and
- (e) No take is for a volume greater than 100,000 litres per day; and
- (f) No take is at a rate greater than 10 litres per second; and
- (g) No back-flow of any contaminated water occurs to the water body; and
- (h) The taking of surface water is not suspended.

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water as primary allocation, under a resource consent has had to cease in accordance with Rule 12.2.3.5, for the catchment or river, or part of the catchment or river, at which the taking of water under this rule is occurring.

12.2.2.6 Except as provided for by Rules 12.2.1.1 to 12.2.2.5, the taking and use of groundwater from:

- (i) Any aquifer listed in Schedule 2C; or
- (ii) Within 100 metres of any wetland, lake or river, is a *permitted* activity, providing:
 - (a) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
 - (b) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
 - (c) No lawful take of water is adversely affected as a result of the taking; and
 - (d) No take is for a volume greater than 25,000 litres per day at any landholding; and
 - (e) No take is at a rate greater than 0.5 litres per second in the North Otago, Maniototo or Central Otago subregions (as identified on Maps A1–A8), or greater than 1 litre per second elsewhere in Otago; and
 - (f) No back-flow of contaminated water occurs to the water body; and
 - (g) The taking of surface water is not suspended.

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water as primary allocation, under a resource consent has had to cease in accordance with Rule 12.2.3.5, for the catchment or river, or part of the catchment or river, at which the taking of water under this rule is occurring.

12.2.2.A Controlled activity: Consent required but always granted

12.2.2A.1 Unless covered by Rule 12.2.1A.1, the taking and use of groundwater for community water supply, by any take identified in Schedule 3B, up to any volume or rate listed in Schedule 3B, is a **controlled** activity.

In granting any resource consent for the taking and use of groundwater in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) The need to observe a restriction level, and
- (b) The need for a residual flow at the point of take; and
- (c) The rate, volume, timing and frequency of the water to be taken and used; and
- (d) The quantity of water required to meet the needs of the community; and
- (e) The proposed methods of take and delivery of the water taken; and
- (f) The duration of the resource consent; and
- (g) The information and monitoring requirements; and
- (h) Any bond; and
- (i) The review of conditions of the resource consent; and
- (j) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.2.3 Restricted discretionary activities: Resource consent required

12.2.3.1 *[Repealed – 1 March 2012]*

12.2.3.1A Unless covered by Rule 12.2.1A.1, the taking of groundwater from any Schedule 2C aquifer or from within 100 metres of any connected perennial surface water body, and the use of that groundwater, is a **restricted discretionary** activity, if all the standards and terms set out under Rules 12.1.4.1 to 12.1.4.7 that apply to the proposed taking and use are met, as if the take is surface water, except that any date should be read as 10 April 2010.

The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.

12.2.3.2 *[Repealed – 1 March 2012]*

12.2.3.2A Except as provided for by 12.0.1.3, 12.2.1A.3 and 12.2.3.1A, the taking and use of groundwater is a **restricted discretionary** activity, if:

- (a) The volume sought is within:
 - (i) The maximum allocation limit identified in Schedule

- 4A; or
- (ii) 50% of the mean annual recharge calculated under Schedule 4D, for any aquifer not identified in Schedule 4A; or
- (iii) That volume specified in an existing resource consent where the assessed maximum annual take of the aquifer exceeds its maximum allocation limit; and
- (b) It is subject to any aquifer restriction identified in Schedule 4B; and
- (c) Where the rate of surface water depletion is greater than 5 l/s, as calculated using Schedule 5A:
 - (i) Primary surface water allocation is available; and
 - (ii) For the Waitaki catchment, allocation to activities set out in Table 12.1.4.2 is available.

The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.2.3.4.

12.2.3.3 *[Repealed – 1 March 2012]*

- 12.2.3.4 Restricted discretionary activity considerations
- In considering any resource consent for the taking and use of groundwater in terms of Rule 12.2.3.2A, the Otago Regional Council will restrict the exercise of its discretion to the following:
- (i) The maximum allocation limit for the aquifer; and
 - (iA) The assessed maximum annual take for the aquifer; and
 - (ii) The mean annual recharge of the aquifer; and
 - (iii) The effect of the take on the hydrodynamic properties of the aquifer and the vulnerability of the aquifer to compaction; and
 - (iv) Whether any part of the take would constitute allocation from any connected perennial surface water body, and the availability of that allocation; and
 - (v) The rate, volume, timing and frequency of groundwater to be taken and used; and
 - (vi) The proposed methods of take, delivery and application of the groundwater taken; and
 - (vii) The source of groundwater available to be taken; and
 - (viii) The location of the use of the groundwater, when it will be taken out of a local catchment; and
 - (ix) In the case of takes from an aquifer identified in Schedule 4B, the restrictions for the aquifer (as identified in that schedule) to be applied to the take of groundwater, if consent is granted; and

- (x) The consent being exercised or suspended in accordance with any Council approved rationing regime; and
- (xi) Any adverse effect on the existing quality of groundwater in the aquifer; and
- (xii) Any irreversible or long term degradation of soils arising from the use of water for irrigation; and
- (xiii) Any actual or potential effects on any surface water body; and
- (xiv) Any adverse effect on the habitat of any indigenous freshwater fish species that are listed in Schedule 1AA; and
- (xv) Any effect on any Regionally Significant Wetland or on a regionally significant wetland value; and
- (xvi) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and
- (xvii) Any adverse effect on any lawful take of water, if consent is granted, including potential bore interference; and
- (xviii) Whether the taking of water under a water permit should be restricted to allow the exercise of another water permit; and
- (xix) Any arrangement for cooperation with other takers or users; and
- (xx) Any water storage facility available for the groundwater taken, and its capacity; and
- (xxi) The duration of the resource consent; and
- (xxii) The information, monitoring and metering requirements; and
- (xxiii) Any bond; and
- (xxiv) The review of conditions of the resource consent; and
- (xxv) For resource consents in the Waitaki catchment the matters in (i) to (xxi) above, as well as matters in Policies 6.6A.1 to 6.6A.6.

Notification and written approvals

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.2.3.5 The suspension of takes

- (i) It is a term of any taking of groundwater under Rules 12.2.1A.1, 12.2.2.5, 12.2.2.6 and 12.2.3.1A that, when the flow in the catchment in which the take occurs is equal to or less than a minimum flow set by or under these rules, the Council may, by public notice, suspend all taking to enable the minimum flow to be met.

These catchments have access to flow information via the “Water Info” telephone service, and the taking of water under those consents shall cease automatically (without notification by Council) when the flow is at or below the minimum set in

Schedule 2A until the flow again exceeds the minimum flow specified in Schedule 2A.

- (ii) It is a term of any taking of groundwater under Rule 12.2.2.2 that, when the aquifer levels are equal to or less than those set by those rules, the Otago Regional Council may, by public notice, suspend the taking of groundwater to enable the restrictions to be met.
- (iii) Any notice given under paragraph (i) or (ii) of this rule comes into force on the date specified in the notice and continues in force until revoked by public notice. Any notice may relate to one or more catchments or aquifers.

12.2.4 **Discretionary activities: Resource consent required**

- 12.2.4.1 (i) Except as provided for by Rules 12.2.1.1 to 12.2.3.5 the taking and use of groundwater is a *discretionary* activity.
- (ii) Unless covered by Rule 12.2.1A.1, the taking and use of groundwater in the Waitaki catchment to which this rule applies is a *discretionary* activity provided that by itself or in combination with any other take, use, dam or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2. In considering an application to which this rule applies, the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.6.

12.2.5 *[Moved to 12.2.1A – 1 October 2013]*

Principal reasons for adopting

The taking and use of groundwater can only occur if they are expressly allowed by a rule in a regional plan, or in any relevant proposed regional plan, or by a resource consent (Section 14(3) of the Resource Management Act).

Rule 12.2.1.1 is adopted to provide for and be fully consistent with Policy 12.5.1 of the Regional Policy Statement for Otago. The rule prohibits all taking of groundwater for use in nuclear power generation plants and in nuclear weapons manufacturing.

Rule 12.2.1.2 is adopted to prohibit takes of water from Lake Tuakitoto when the minimum level established by this plan is in force. This rule continues the minimum lake level already established to protect the lake's recreational and wildlife features by The Local Water Conservation (Lake Tuakitoto) Notice, 1991.

Rule 12.2.2.0 is adopted to permit the use of groundwater take under a resource consent granted prior to 10 April 2010.

The taking and use of groundwater under Rules 12.2.2.1 to 12.2.2.6 will have no more than minor adverse effects on the aquifer from which the water is taken,

any wetland, lake or river, or on any other person taking water. These rules are adopted to enable access to resources while providing protection for the existing consumptive uses of the groundwater.

The taking and use of groundwater under Rule 12.2.2A.1 for existing community water supply takes identified in Schedule 3B is a controlled activity in order that the needs of Otago’s communities can continue to be met.

The taking of groundwater under Rule 12.2.3.1A is treated as surface water taking, subject to the standards and terms in the specified surface water rules, which include the minimum flows that apply in the relevant catchments. This will maintain surface water levels and the groundwater volume of the aquifers, protect aquifer ecosystems and natural character, while ensuring recognised uses can continue.

The taking of groundwater under Rule 12.2.3.2A, is treated as the taking of groundwater and part surface water, where surface water depletion is greater than 5 l/s. This will maintain the levels identified for the specified aquifers and the groundwater volume of the aquifers, while ensuring the aquifers’ recognised uses can continue. This will also ensure that the effect of the take on the surface water body is recognised.

The Council has restricted the exercise of its discretion when considering applications for resource consents under Rules 12.2.3.1A and 12.2.3.2A.

Any other activity involving the taking of groundwater is either a discretionary activity or a non-complying activity in order that any adverse effects can be assessed. Non-complying activity Rule 12.2.1A.2 was added to this Plan by the Waitaki Catchment Water Allocation Regional Plan.

12.3 The damming or diversion of water

Note: The erection of a dam in the bed of a lake or river is covered by Rules 13.2.1.3 and 13.2.3.1.

12.3.1 Prohibited activities: No resource consent will be granted

12.3.1.1 The damming of the following rivers is a *prohibited* activity for which no resource consent will be granted:

- (a) Kawarau River main stem from Scrubby Stream to the Lake Wakatipu control gates (F41:035680 to F41:738667);
- (b) Shotover River main stem at or about F41:765680 to E40:662173);
- (c) Dart River/Te Awa Whakatipu main stem from Lake Wakatipu to confluence with Beans Burn (at or about E41:438853 to E40:375077);
- (d) Rees River main stem from Lake Wakatipu to confluence with Hunter Creek (at or about E41:448852 to E40:499117); and

- (e) Diamond Lake, Diamond Creek and Lake Reid (at or about E40:435975; E40:444963 to E40:450918).
- 12.3.1.2 The damming of Lake Wanaka and of the Upper Clutha River/Mata-Au between F40:050089 to F40:088067, other than for the duration of an emergency as declared by the Guardians of Lake Wanaka under the Lake Wanaka Preservation Act 1973, is a **prohibited** activity for which no resource consent will be granted.
- 12.3.1.3 The damming of the following rivers, other than for stockwater supply purposes, is a **prohibited** activity for which no resource consent will be granted:
- (a) Pomahaka River, including its tributaries, from its sources to its confluence (G45:447454) with the Clutha River/Mata-Au;
 - (b) Waipahi River from its source to its confluence (G45:194520) with the Pomahaka River; and
 - (c) Lower Clutha River/Mata-Au from its confluence (G45:447454) with the Pomahaka River to the sea at the mouths of the Matau and Koau Branches.
- 12.3.1.4 The diversion of surface water from Lake Tuakitoto when the level of the lake is below 100.77 metres above datum, during the period beginning 30 September in any year and ending 16 May in any following year, is a **prohibited** activity for which no resource consent will be granted.

12.3.1A Non-complying activities: Resource consent required

- 12.3.1A.1 The damming or diversion of water within any Regionally Significant Wetland is a **non-complying** activity unless:
- (i) It is prohibited by Rules 12.3.1.1 to 12.3.1.4; or
 - (ii) It is permitted by Rules 12.3.2.1 to 12.3.2.3; or
 - (iii) It is provided for by Rule 12.3.3.1.

An application involving wind energy infrastructure, which because of specific locational constraints affects a Regionally Significant Wetland, will not be bundled with other activities which do not affect a Regionally Significant Wetland.

- 12.3.1A.2 Except as provided for in Rules 12.3.1A.1 and 12.3.1A.3, the damming or diversion of water in the Waitaki catchment when, by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, exceeds the allocations to activities set out in Rules 12.3.3.1 and 12.3.4.1 is a **non-complying** activity.

In considering an application to which this rule applies the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.5.

12.3.1A.3 Unless covered by Rule 12.3.1A.1, the damming or diversion of water from Welcome Creek is a *non-complying* activity.

In considering an application to which this rule applies the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.6.

12.3.2 Permitted activities: No resource consent required

12.3.2.1 Unless prohibited by Rules 12.3.1.1 to 12.3.1.4, the damming or diversion of water is a *permitted* activity, providing:

- (a) The size of the catchment upstream of the dam, weir or diversion is no more than 50 hectares in area; and
- (b) In the case of damming, the water immediately upstream of the dam is no more than 3 metres deep, and the volume of water stored by the dam is no more than 20,000 cubic metres; and
- (c) In the case of diversion, the water is conveyed from one part of any lake or river, or its tributary, to another part of the same lake, river or tributary; and
- (d) No lawful take of water is adversely affected as a result of the damming or diversion; and
- (e) Any damming or diversion within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and
- (f) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (g) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (h) The damming or diversion does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
- (i) The damming or diversion is not within the Waitaki catchment.

12.3.2.2 The diversion of water, for the purpose of land drainage, is a *permitted* activity, providing:

- (a) Any diversion within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and
- (b) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (c) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (d) The diversion does not result in the lowering of the level of water in any lake or river; and
- (e) The diversion does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

- 12.3.2.3 Unless prohibited by Rules 12.3.1.1 to 12.3.1.4, the diversion of water carried out for the purposes of allowing the erection, placement, repair or maintenance of a lawful structure, is a *permitted* activity, providing:
- (a) The course of the water always remains within the bed of the lake or river; and
 - (b) The course of the water is returned to its normal course following the completion of the repair or maintenance, and no more than one month after the diversion occurs; and
 - (c) No lawful take of water is adversely affected as a result of the diversion; and
 - (d) Any structure within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and
 - (e) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
 - (f) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
 - (g) The diversion does not cause any erosion, land instability, sedimentation or property damage.

12.3.3 Restricted discretionary activities: Resource consent required

- 12.3.3.1 (i) The damming of water, which has been previously carried out under a resource consent or other lawful authority, is a *restricted discretionary* activity, unless:
- (a) It is prohibited by Rules 12.3.1.1 to 12.3.1.4; or
 - (b) It is permitted by Rule 12.3.2.1; or
 - (c) It is in Welcome Creek.
- (ii) Unless covered by Rule 12.3.1A.1, the damming of water in the Waitaki catchment, except in Welcome Creek, to which this rule applies is a *restricted discretionary* activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2.
- (iii) The damming of water within a wetland for the purpose of wetland restoration or enhancement is a *restricted discretionary* activity, unless;
- (a) It is prohibited by Rules 12.3.1.1 to 12.3.1.4; or
 - (b) It is permitted by Rules 12.3.2.1 to 12.3.2.3.

In considering any resource consent for the damming of water in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following matters:

- (a) Any adverse effects of continuing or discontinuing the damming of water on:
 - (i) Any natural or human use value identified in Schedule 1 for any affected water body including the impoundment itself;
 - (ii) The natural character of any affected water body including the impoundment itself;
 - (iii) Any amenity value supported by any affected water body including the impoundment itself;
 - (iv) Any heritage value associated with any affected water body including the impoundment itself; and
 - (v) Any existing lawfully established take or damming of water; and
- (b) Any effect on any Regionally Significant Wetland, or on any regionally significant wetland value; and
- (c) In the case of an application under Rule 12.3.3.1(iii):
 - (i) Any adverse effects on any existing lawfully established take, use, diversion or damming of water; and
 - (ii) Any effect on any wetland or any wetland value; and
- (d) Any maximum or minimum level or flow of water, and the range, or rate of change, of levels or flows of water; and
- (e) Flooding, erosion, land instability, sedimentation or property damage resulting from the damming or from the discontinuation of the damming; and
- (f) Any restoration of exposed lake bed resulting from any reduction in authorised lake level; and
- (g) The purpose of the existing dam or lake level control; and
- (h) The duration of the resource consent; and
- (i) The information and monitoring requirements; and
- (j) Any financial contribution, including for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and
- (k) Any bond; and
- (l) Any insurance or other appropriate means of remedying the effects of failure; and
- (m) Any adverse effect on any lawful priority attached to any resource consent or deemed permit; and
- (n) Whether the damming of water under a water permit should be restricted to allow the damming or taking of water under any other permit; and
- (o) The review of conditions of the resource consent; and

- (p) For resource consents in the Waitaki catchment, matters in (a) to (o) above as well as matters in Policies 6.6A.1 to 6.6A.5.

12.3.4 Discretionary activities: Resource consent required

- 12.3.4.1 (i) Except as provided for by Rules 12.3.1.1 to 12.3.3.1 and except in the Waitaki catchment, the damming or diversion of water is a *discretionary* activity.
- (ii) Unless covered by Rule 12.3.1A.1, the damming or diversion of water in the Waitaki catchment, except in Welcome Creek to which this rule applies is a *discretionary* activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2. In considering an application to which this rule applies the consent authority will have regard, among other matters, to Policies 6.6A.1 to 6.6A.5.

12.3.5 *[Moved to 12.3.1A – 1 October 2013]*

Principal reasons for adopting

The damming or diversion of water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 14(3) of the Resource Management Act).

The Water Conservation (Kawarau) Order and the Lake Wanaka Preservation Act prohibit the damming of water. The Pomahaka River and Tributaries and Lower Clutha River Local Water Conservation Notice, deleted by this Plan, also prohibited the damming of water. It is therefore appropriate to prohibit the damming of the same waters within this Plan, as provided for by Rules 12.3.1.1 to 12.3.1.3.

Rule 12.3.1.4 is adopted to prohibit the diversion of water from Lake Tuakitoto when the minimum level established by this Plan is in force. This rule continues the minimum lake level already established to protect the lake's recreational and wildlife features by The Local Water Conservation (Lake Tuakitoto) Notice, 1991.

The damming or diversion of water under Rules 12.3.2.1 to 12.3.2.3, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable small dams or diversions while providing protection for those values and the interests of those people. Any other activity involving the damming or diversion of water is either a restricted discretionary activity, a discretionary activity or a non-complying activity in order that any adverse effects can be assessed. Non-complying activity Rules 12.3.1A.2 and 12.3.1A.3 were added to this Plan by the Waitaki Catchment Water Allocation Regional Plan.

12.4 Discharge of stormwater *[Repealed – 1 May 2014]*

12.4.1 *[Repealed – 1 May 2014]*

12.4.1.1 *[Renumbered as 12.B.1.8 – 1 May 2014]*

12.4.1.2 *[Renumbered as 12.B.1.9 – 1 May 2014]*

12.4.2 *[Repealed – 1 May 2014]*

12.4.2.1 *[Renumbered as 12.B.3.1 – 1 May 2014]*

12.5 Discharge of drainage water *[Repealed – 1 May 2014]*

12.5.1 *[Repealed – 1 May 2014]*

12.5.1.1 *[Repealed – 1 May 2014]*

12.5.2 *[Repealed – 1 May 2014]*

12.5.2.1 *[Repealed – 1 May 2014]*

12.6 Discharge of human sewage *[Renumbered as 12.A – 1 May 2014]*

12.6.1 *[Renumbered as 12.A.1 – 1 May 2014]*

12.6.1.1 *[Renumbered as 12.A.1.1 – 1 May 2014]*

12.6.1.2 *[Renumbered as 12.A.1.2 – 1 May 2014]*

12.6.1.3 *[Renumbered as 12.A.1.3 – 1 May 2014]*

12.6.1.4 *[Renumbered as 12.A.1.4 – 1 May 2014]*

12.6.2 *[Renumbered as 12.A.2 – 1 May 2014]*

12.6.2.1 *[Renumbered as 12.A.2.1 – 1 May 2014]*

12.7 Discharge of pesticides *[Repealed – 1 May 2014]*

12.7.1 *[Amended to 12.B.1 – 1 May 2014]*

12.7.1.1 *[Amended to 12.B.1.1 – 1 May 2014]*

12.7.1.2 *[Amended to 12.B.1.2 – 1 May 2014]*

12.7.1.3 *[Renumbered as 12.B.1.3 – 1 May 2014]*

12.7.1.4 *[Amended to 12.B.1.4 – 1 May 2014]*

12.7.2 *[Repealed – 1 May 2014]*

12.7.2.1 *[Repealed – 1 May 2014]*

12.A Discharge of human sewage

12.A.A General Rules for section 12.A

12.A.A.1 The discharge rules in section 12.A apply where a discharge contains human sewage.

Note: The approval of particular technologies for the on-site treatment of human sewage under particular land conditions will usually require the involvement of the relevant city or district council, under the Building Act 2004 or the Health Act 1956. This Plan deals only with the effect of the discharge on the environment, and does not promote any particular technology or treatment method.

12.A.1 Permitted activities: No resource consent required

12.A.1.1 The discharge of human sewage into land from an existing long-drop toilet is a *permitted* activity, providing:

- (a) The discharge was lawfully carried out without resource consent prior to 28 February 1998; and
- (b) There is no direct discharge of human sewage, or effluent derived from it, to water in any water body, drain, water race, or the coastal marine area.

12.A.1.2 The discharge of human sewage into land from any long-drop toilet constructed after 28 February 1998 is a *permitted* activity, providing:

- (a) The toilet is sited more than 50 metres from any surface water body or mean high water springs; and
- (b) The toilet is sited more than 50 metres from any bore which:
 - (i) Existed before the commencement of the discharge associated with the long-drop toilet; and
 - (ii) Is used to supply water for domestic needs or drinking water for livestock; and
- (c) The discharge does not occur within any Groundwater Protection Zone, as identified on the C-series maps, nor in the area of the Lake Hayes catchment as identified on Map B6; and;
- (d) There is no direct discharge of human sewage, or effluent derived from it, to water in any drain or water race, or to groundwater; and
- (e) The toilet is constructed so that no runoff enters the hole.

12.A.1.3 The discharge of human sewage through any existing on-site waste water treatment system onto or into land is a *permitted* activity, providing:

- (a) The discharge was lawfully carried out without resource consent prior to 28 February 1998; and

- (b) There is no direct discharge of human sewage, or effluent derived from it, to water in any water body, drain, water race, or the coastal marine area; and
- (c) Effluent from the system does not run off to any other person's property; and
- (d) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.A.1.4 The discharge of human sewage through any on-site waste water treatment system, installed after 28 February 1998, onto or into land is a *permitted* activity, providing:

- (a) The discharge does not exceed 2000 litres per day (calculated as a weekly average); and
- (b) The discharge does not occur within the A zone of any Groundwater Protection Zone, as identified on the C-series maps, nor in the area of the Lake Hayes catchment, as identified on Map B6; and
- (c) The system's disposal field is sited more than 50 metres from any surface water body or mean high water springs; and
- (d) The system's disposal field is sited more than 50 metres from any bore which:
 - (i) Existed before the commencement of the discharge activity; and
 - (ii) Is used to supply water for domestic needs or drinking water for livestock; and
- (e) There is no direct discharge of human sewage, or effluent derived from it, to water in any drain or water race, or to groundwater; and
- (f) Effluent from the system does not run off to any other person's property; and
- (g) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.A.2 Discretionary activities: Resource consent required

12.A.2.1 Except as provided for by Rules 12.A.1.1 to 12.A.1.4, the discharge of human sewage to water, or onto or into land in circumstances where it may enter water, is a *discretionary* activity.

Principal reasons for adopting

The discharge of human sewage to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act). The discharge of human sewage to land (under conditions that ensure it does not enter water)

cannot be carried out in a manner that contravenes a rule in a regional plan or proposed regional plan (Section 15(2) of the Resource Management Act).

The discharge of human sewage to land under Rules 12.A.1.1 to 12.A.1.4, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, because contaminants are unlikely to reach water bodies. These rules are adopted to enable human sewage to be discharged while providing protection for those values and the interests of those people. Any other activity involving the discharge of human sewage, is a discretionary activity in order that any adverse effects can be assessed.

12.B Discharge of hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams

12.B.A General Rules for section 12.B

12.B.A.1 The discharge rules in section 12.B apply where a discharge:

- (a) Contains a contaminant provided for in section 12.B; or
- (b) Is from an industrial or trade premises or consented dam.

12.B.A.2 The discharge rules in section 12.A apply in addition to 12.B where a discharge contains human sewage.

12.B.1 Permitted activities: No resource consent required

12.B.1.1 The discharge of any herbicide to water for the control of aquatic plants is a *permitted* activity, providing:

- (a) The herbicide and any associated additive are authorised for aquatic use in New Zealand, and are used in accordance with the authorisation; and
- (b) The discharge is carried out in accordance with any manufacturers' directions and is carried out by a person who holds a GROWSAFE Registered Chemical Applicator certificate; and
- (c) The herbicide is applied in the form of a gel; and
- (d) The discharge is for the purpose of controlling aquatic plants and does not exceed the quantity, concentration or rate required for that purpose; and
- (e) No lawful take of water is adversely affected as a result of the discharge; and
- (f) The discharger notifies, at least one week before commencing the discharge:
 - (i) Every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one kilometre downstream of the proposed discharge in any river or

water race, or within one kilometre of the proposed discharge in any lake; and

- (ii) The community through Public Notice, where the discharge will occur directly into a lake, river or any Regionally Significant Wetland.

12.B.1.2 Except as provided for by Rule 12.B.1.1, the land-based discharge of any pesticide onto land is a *permitted* activity, providing:

- (a) The pesticide is authorised for use in New Zealand and is used in accordance with the authorisation; and
- (b) The discharge is carried out in accordance with any manufacturers' directions; and
- (c) The discharge is for the purpose of controlling animals, plants or other organisms and does not exceed the quantity, concentration or rate required for that purpose; and
- (d) There is no direct discharge of the pesticide to water in any water body, drain, water race or the coastal marine area; and
- (e) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.3 The discharge of herbicide to air or land in circumstances where it will enter water, is a *permitted* activity, providing:

- (a) The herbicide and any associated additive are authorised for use in or over water in New Zealand and are used in accordance with the authorisation; and
- (b) The use is carried out in accordance with any manufacturers' directions; and
- (c) The discharge is for the purpose of controlling plants and does not exceed the quantity, concentration or rate required for that purpose; and
- (d) All reasonable measures are taken to minimise any direct discharge of the herbicide to water in any water body, drain, water race, or to the coastal marine area; and
- (e) No lawful take of water is adversely affected as a result of the discharge; and
- (f) The discharger notifies, at least one week before commencing the discharge:
 - (i) Every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one kilometre downstream of the proposed discharge alongside any river or water race, or within one kilometre of the proposed discharge alongside any lake; and
 - (ii) The community through Public Notice, where the

discharge will occur directly into any lake, river or any Regionally Significant Wetland; and

- (g) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.4 Except as provided for by Rule 12.B.1.3, the aerial discharge of any pesticide onto land in circumstances where it, or any contaminant associated with its breakdown, may enter water, is a *permitted* activity, providing:

- (a) The pesticide is authorised for use in New Zealand and is used in accordance with the authorisation; and
- (b) The discharge is carried out in accordance with any manufacturers' directions, by a person who holds a GROWSAFE Pilots Chemical Rating certificate; and
- (c) The discharge is for the purpose of controlling animals, plants or other organisms and does not exceed the quantity, concentration or rate required for that purpose; and
- (d) All reasonable measures are taken to prevent any discharge of the pesticide within 20 metres of water in any water body, drain or water race, or of the coastal marine area; and
- (e) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.5 The discharge of fertiliser onto production land, in circumstances where it may enter water, is a *permitted* activity, providing:

- (a) All reasonable measures are taken to minimise any discharge of the fertiliser to water in any water body, drain or water race, or to the coastal marine area; and
- (b) The discharge is carried out in accordance with the manufacturer's directions; and
- (c) There is no damage to fauna or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.6 The discharge of sullage, cooling water or water from any drinking-water supply reservoir, water supply pipeline or swimming pool to water, or onto or into land in circumstances where it may enter water, is a *permitted* activity, providing:

- (a) The discharge does not contain:
 - (i) A greater concentration of faecal coliforms than that of the receiving water, or a concentration that could cause the faecal coliform concentration of the receiving water, after reasonable mixing, to exceed 150 CFU per 100 mls; or
 - (ii) Any disinfectant, antiseptic or pesticide; or

- (iii) Any residual flocculant, except for aluminium at acid-soluble aluminium concentrations less than 0.1 grams per cubic metre; or
- (iv) Any free or residual chlorine at the point where the discharge enters water in any surface water body or mean high water springs; or
- (v) Human sewage; or
- (vi) Any hazardous substance; and
- (b) The discharge does not increase the natural temperature of the receiving water, after reasonable mixing, by more than 3° Celsius, and does not cause the temperature of the receiving water, after reasonable mixing, to rise above 25° Celsius; and
- (c) The discharge does not increase the suspended solids levels in the receiving water, after reasonable mixing, by more than 10 grams per cubic metre; and
- (d) The discharge does not change the pH of the receiving water, after reasonable mixing, by more than 0.5 pH units; and
- (e) The discharge does not, after reasonable mixing, give rise to any significant adverse effect on aquatic life; and
- (f) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
- (g) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (h) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.7 The discharge of water which has been used for the purpose of holding live organisms to water, or onto or into land in circumstances where it may enter water, is a *permitted* activity, providing:

- (a) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (b) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (c) No contaminant has been added that is toxic to the aquatic life of the receiving water body; and
- (d) The discharge contains no pest plant material (as identified in the Pest Management Strategy for Otago 2001); and
- (e) The discharge does not increase the natural temperature of the receiving waters, after reasonable mixing, by more than 3° Celsius, and does not cause the temperature of the receiving water, after reasonable mixing, to rise above 25° Celsius; and

- (f) The discharge does not increase the suspended solids levels in the receiving water, after reasonable mixing, by more than 10 grams per cubic metre; and
- (g) The discharge does not, after reasonable mixing, give rise to any significant adverse effect on aquatic life; and
- (h) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.B.1.8 The discharge of stormwater from a reticulated stormwater system to water, or onto or into land in circumstances where it may enter water, is a *permitted* activity, providing:

- (a) Where the system is lawfully installed, or extended, after 28 February 1998:
 - (i) The discharge is not to any Regionally Significant Wetland; and
 - (ii) Provision is made for the interception and removal of any contaminant which would give rise to the effects identified in Condition (d) of this rule; and
- (b) The discharge does not contain any human sewage; and
- (c) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
- (d) The stormwater discharged, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:
 - (i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - (ii) Any conspicuous change in the colour or visual clarity; or
 - (iii) Any emission of objectionable odour; or
 - (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
 - (v) Any significant adverse effects on aquatic life.

12.B.1.9 The discharge of stormwater from any road not connected to a reticulated stormwater system to water, or onto or into land, is a *permitted* activity, providing:

- (a) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
- (b) Where the road is subject to works, provision is made for the interception of any contaminant to avoid, after reasonable mixing, the following effects in the receiving water:

- (i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
- (ii) Any conspicuous change in the colour or visual clarity; or
- (iii) Any emission of objectionable odour; or
- (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
- (v) Any significant adverse effects on aquatic life.

12.B.1.10 The discharge of any contaminant, excluding settled sediment, present in water impounded by a dam that is not permitted by Rule 13.2.1.3, to water in a lake or river, is a *permitted* activity, providing:

- (a) The purpose of the dam is not for the storage of contaminants; and
- (b) The dam operator has not caused the contaminant to be discharged into the dam from which it is discharged; and
- (c) The discharge, after reasonable mixing does not give rise to all or any of the following effects:
 - (i) The production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials; or
 - (ii) Any conspicuous change in colour or visual clarity; or
 - (iii) Any emission of objectionable odour; or
 - (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
 - (v) Any significant adverse effect on aquatic life; and
- (d) The discharge ceases when an enforcement officer of the Otago Regional Council requires the discharge to cease to provide for clean-up operations and prevent adverse effects on the environment.

12.B.1.11 Except as provided for by Rule 12.B.1.10, the discharge of a trace amount of any contaminant, originating from within a hydro-electric power structure, into water, is a *permitted* activity.

12.B.2 Controlled activities: Resource consent required but always granted

12.B.2.1 The discharge of tracer dye to water is a *controlled* activity, providing it is chemically inert, non-radioactive, and non-toxic.

In granting any resource consent for the discharge of tracer dye in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) Any adverse effects of the discharge on:
 - (i) Any natural and human use value identified in Schedule

- 1 for any affected water body;
- (ii) The natural character of any affected water body; and
- (iii) Any amenity value supported by any affected water body; and
- (b) Any adverse effect on an existing lawful take of water; and
- (c) The location and timing of the discharge; and
- (d) The nature of the dye; and
- (e) The duration of the resource consent; and
- (f) The information and monitoring requirements; and
- (g) Any bond; and
- (h) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

12.B.3 Restricted discretionary activities: Resource consent required

- 12.B.3.1 Except as provided for by Rules 12.B.1.8 and 12.B.1.9, the discharge of stormwater to water, or onto or into land in circumstances where it may enter water, is a *restricted discretionary* activity.

In considering any resource consent for the discharge of stormwater in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any adverse effects of the discharge on:
 - (i) Any natural and human use value identified in Schedule 1 for any affected water body;
 - (ii) The natural character of any affected water body;
 - (iii) Any amenity value supported by any affected water body; and
 - (iv) Any heritage value associated with any affected water body; and
- (b) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and
- (d) The volume, rate and method of the discharge; and
- (e) The nature of the discharge; and
- (f) Treatment options; and

- (g) The location of the discharge point or area, and alternative receiving environments; and
- (h) The likelihood of erosion, land instability, sedimentation or property damage resulting from the discharge of stormwater; and
- (i) The potential for soil contamination; and
- (j) The duration of the resource consent; and
- (k) The information and monitoring requirements; and
- (l) Any bond; and
- (m) Any existing lawful activity associated with any affected water body; and
- (n) The review of conditions of the resource consent.

12.B.4 Discretionary activities: Resource consent required

- 12.B.4.1 The discharge of water (excluding stormwater) or any contaminant from an industrial or trade premises or a consented dam to water or to land is a *discretionary* activity, unless it is permitted by Rule 12.B.1.6, 12.B.1.7, 12.B.1.10 or 12.B.1.11.
- 12.B.4.2 The discharge of any hazardous substance to water or onto or into land in circumstances which may result in that substance entering water is a *discretionary* activity, unless it is:
 - (a) Permitted by a rule in 12.B.1; or
 - (b) Provided for by a rule in 12.B.2 or 12.B.3.
- 12.B.4.3 The discharge of water or any contaminant covered in section 12.B.1 or 12.B.2, to water or onto or into land in circumstances which may result in that water or contaminant entering water, is a *discretionary* activity, unless it is:
 - (a) Permitted by a rule in 12.B.1; or
 - (b) Provided for by a rule in 12.B.2, 12.B.3, 12.B.4.1 or 12.B.4.2.

12.8 Discharge of agricultural waste and fertiliser *[Repealed – 1 May 2014]*

12.8.1 *[Repealed – 1 May 2014]*

12.8.1.1 *[Repealed – 1 May 2014]*

12.8.1.2 *[Repealed – 1 May 2014]*

12.8.1.3 *[Repealed – 1 May 2014]*

12.8.1.4 *[Repealed – 1 May 2014]*

12.8.1.5 *[Renumbered as 12.B.1.5 – 1 May 2014]*

12.8.2 *[Repealed – 1 May 2014]*

12.8.2.1 *[Repealed – 1 May 2014]*

12.8.3 *[Repealed – 1 May 2014]*

12.8.3.1 *[Repealed – 1 May 2014]*

12.9 Discharges from drilling and bore testing *[Repealed – 1 May 2014]*

12.9.1 *[Repealed – 1 May 2014]*

12.9.1.1 *[Repealed – 1 May 2014]*

12.9.1.2 *[Repealed – 1 May 2014]*

12.9.2 *[Repealed – 1 May 2014]*

12.9.2.1 *[Repealed – 1 May 2014]*

12.10 Discharges from vessels *[Repealed – 1 May 2014]*

12.10.1 *[Repealed – 1 May 2014]*

12.10.1.1 *[Repealed – 1 May 2014]*

12.10.2 *[Repealed – 1 May 2014]*

12.10.2.1 *[Repealed – 1 May 2014]*

12.11 Discharge of water or tracer dye *[Repealed – 1 May 2014]*

12.11.1 *[Repealed – 1 May 2014]*

12.11.1.1 *[Repealed – 1 May 2014]*

12.11.2 *[Repealed – 1 May 2014]*

12.11.2.1 *[Renumbered as 12.B.1.6 – 1 May 2014]*

12.11.2.2 *[Renumbered as 12.B.1.7 – 1 May 2014]*

12.11.2.3 *[Repealed – 1 May 2014]*

12.11.3 *[Repealed – 1 May 2014]*

12.11.3.1 *[Renumbered as 12.B.2.1]*

12.12 Discharges from dams and reservoirs *[Repealed – 1 May 2014]*

12.12.1 *[Repealed – 1 May 2014]*

12.12.1.1 *[Renumbered as 12.B.1.10 – 1 May 2014]*

12.12.1.2 *[Renumbered as 12.B.1.11 – 1 May 2014]*

12.13 Other discharges *[Repealed – 1 May 2014]*

12.13.1 *[Repealed – 1 May 2014]*

12.13.1.1 *[Repealed – 1 May 2014]*

12.C Other discharges

12.C.A.1 Discharge rules in section 12.C apply to any discharge not provided for in sections 12.A, 12.B or 13.5.

12.C.A.2 Within section 12.C, prohibited activity rules prevail over any permitted, controlled, restricted discretionary and discretionary activity rules.

Note: Rules applying to plantation forestry:

- Refer to the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017:
<http://www.legislation.govt.nz/regulation/public/2017/0174/latest/whole.html>
- Refer to Schedule 17: Rules applying to plantation forestry in Otago.
- Rules that apply: 12.C.1.1 (d) (e) (f), excluding (iii); 12.C.2.1; 12.C.2.2; 12.C.2.4; 12.C.3.2.

12.C.0 Prohibited activities: No resource consent will be granted

12.C.0.1 The discharge of any contaminant to water, that produces an objectionable odour, or a conspicuous oil or grease film, scum, or foam in any:

- (i) Lake, river or Regionally Significant Wetland; or
 - (ii) Drain or water race that flows to a lake, river, Regionally Significant Wetland or coastal marine area; or
 - (iii) Bore or soak hole,
- is a **prohibited** activity.

12.C.0.2 The discharge of any contaminant from ~~an animal waste system~~, silage storage or a composting process:

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- (i) To any lake, river or Regionally Significant Wetland; or
 - (ii) To any drain or water race that goes to a lake, river, Regionally Significant Wetland or coastal marine area; or
 - (iii) To the bed of any lake, river or Regionally Significant Wetland; or
 - (iv) To any bore or soak hole; or
 - (v) To land in a manner that results in overland flow entering any:
 - (a) Lake, river, Regionally Significant Wetland or coastal marine area that is not permitted under Rule 12.C.1.1 or 12.C.1.1A; or
 - (b) Drain or water race that goes to any lake, river, Regionally Significant Wetland or coastal marine area that is not permitted under Rule 12.C.1.1 or 12.C.1.1A; or
 - (vi) To land within 50 metres of:
 - (a) Any lake, river or Regionally Significant Wetland; or
 - (b) Any bore or soak hole; or
 - (vii) To saturated land; or
 - (viii) That results in ponding,
- is a **prohibited** activity.

- 12.C.0.3 Any discharge of sediment from disturbed land to water in any:
- (i) Lake, river or Regionally Significant Wetland; or
 - (ii) Drain or water race that flows to a lake, river, Regionally Significant Wetland or coastal marine area,
- where no measure is taken to mitigate sediment runoff, is a *prohibited* activity.

12.C.0.4 The discharge of animal waste from an animal waste system:

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- (i) To any lake, river or Regionally Significant Wetland; or
 - (ii) To any drain or water race that goes to a lake, river, Regionally Significant Wetland or coastal marine area; or
 - (iii) To the bed of any lake, river or Regionally Significant Wetland; or
 - (iv) To any bore or soak hole; or
 - (v) To land within 50 metres of:
 - (a) Any lake, river or Regionally Significant Wetland; or
 - (b) Any bore or soak hole; or
 - (vi) To land in a manner that results in ponding or overland flow to water, including to frozen land; or
 - (vii) That results in any of the following effects in receiving waters, after reasonable mixing:
 - (a) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - (b) any conspicuous change in the colour or visual clarity; or
 - (c) any emission of objectionable odour; or
 - (d) the rendering of fresh water unsuitable for consumption by farm animals; or
 - (e) any significant adverse effects on aquatic life;
- is a *prohibited* activity.

12.C.1 Permitted activities: No resource consent required

- 12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in a contaminant entering water, is a *permitted* activity, providing:
- (a) The discharge does not result in flooding, erosion, land instability or property damage; and
 - (b) There is no discharge of water from one catchment to water in another catchment; and

- (c) The discharge does not change the water level range or hydrological function of any Regionally Significant Wetland; and
- (d) When the discharge, including any discharge from a drain or water race, enters water in any lake, river, wetland or the coastal marine area; the discharge:
 - (i) Does not result in:
 - (1) A conspicuous change in colour or visual clarity; or
 - (2) A noticeable increase in local sedimentation, in the receiving water (*refer to Figure 5*); and
 - (ii) Does not have floatable or suspended organic materials; and
 - (iii) Does not have an odour, oil or grease film, scum or foam; and
- (e) When the discharge enters water in any drain¹ that goes to a lake, river, wetland, or the coastal marine area, the discharge:
 - (i) Does not result in:
 - (1) A conspicuous change in colour or visual clarity; or
 - (2) A noticeable increase in local sedimentation, in the lake, river, wetland or the coastal marine area (*refer to Figure 6*); and
 - (ii) Does not result in the production of conspicuous floatable or suspended organic materials in the drain at the first of:
 - (1) The downstream boundary of the landholding where the discharge occurs; or
 - (2) Immediately before the drain enters a river, lake, wetland or the coastal marine area; and
 - (iii) Does not have an odour, oil or grease film, scum or foam; and
- (f) When the discharge enters water in any water race² that goes to a lake, river, wetland, or the coastal marine area, the discharge:
 - (i) Does not result in:
 - (1) A conspicuous change in colour or visual clarity; or
 - (2) A noticeable increase in local sedimentation,

¹ In Rules 12.C.1.1 and 12.C.1.1A, ‘drain’ includes any system of drains that goes to a lake, river, wetland or the coastal marine area.

² In Rules 12.C.1.1 and 12.C.1.1A, ‘water race’ includes any system of water races that goes to a lake, river, wetland or the coastal marine area.

- in the water race (*refer to Figure 7*); and
- (ii) Does not result in the production of conspicuous floatable or suspended organic materials in the race at the first of:
 - (1) The downstream boundary of the landholding where the discharge occurs; or
 - (2) Immediately before the race enters a river, lake, wetland or the coastal marine area; and
 - (iii) Does not have an odour, oil or grease film, scum or foam; and
- (g) From 1 April 2026, the discharge also complies with 12.C.1.1A.

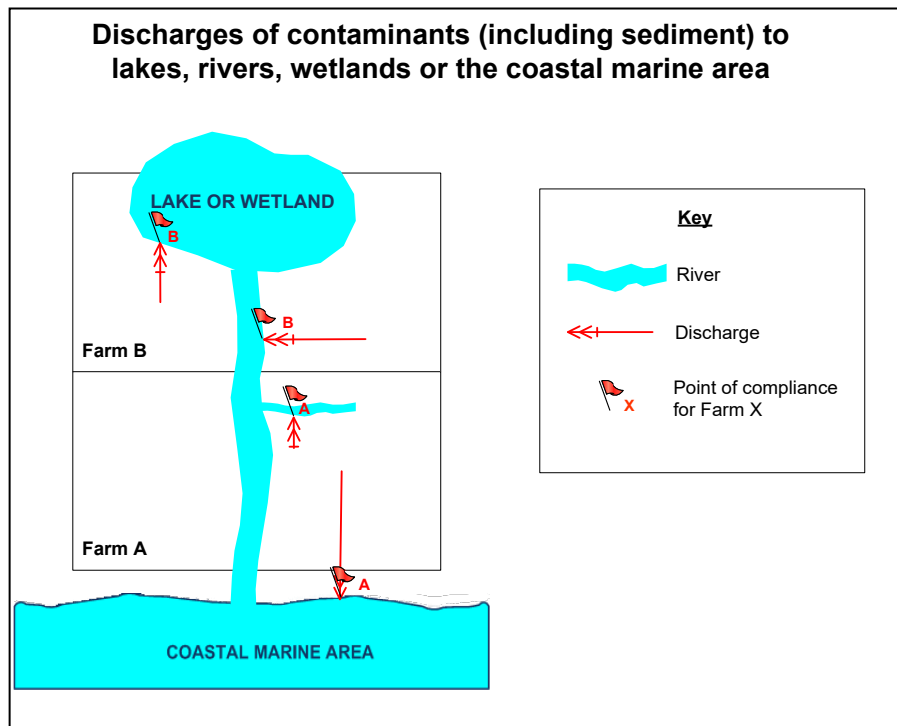


Figure 5: Implementation of Rule 12.C.1.1(d)(i)

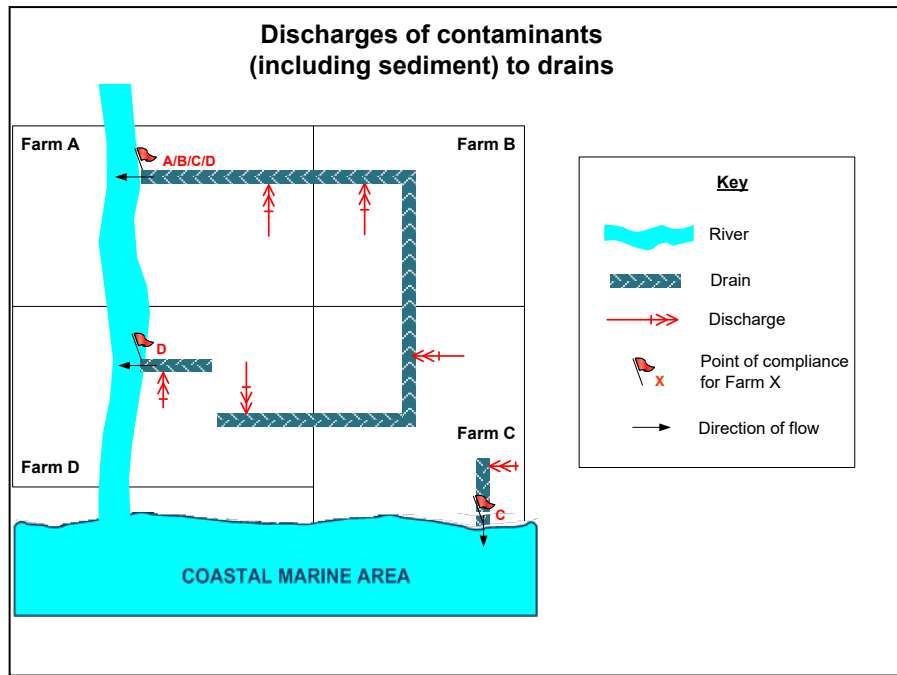


Figure 6: Implementation of Rule 12.C.1.1(e)(i)

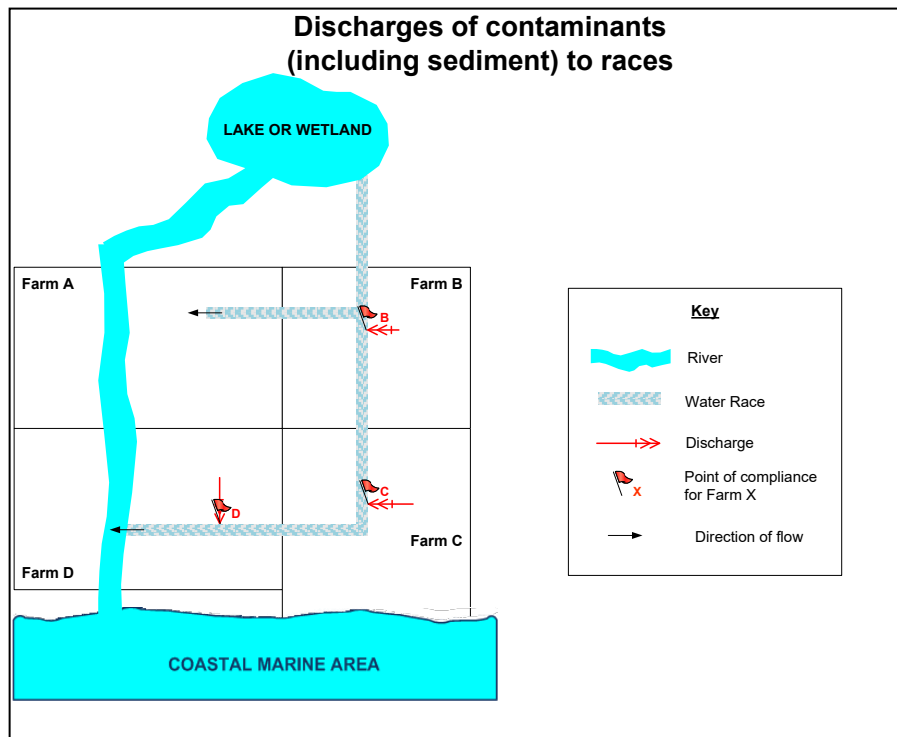


Figure 7: Implementation of Rule 12.C.1.1(f)(i)

12.C.1.1A From 1 April 2026, in addition to Rule 12.C.1.1, when the water flow at the relevant representative flow monitoring site is at or below the reference flow in Schedule 16B, the following conditions apply:

- (a) (i) If the discharge causes contaminants to first enter water in any lake, river, wetland, or the coastal marine area, the discharge does not exceed any of the thresholds in Schedule 16A immediately before entering a river, lake, wetland or the coastal marine area (*refer to Figure 8*),

except:

- (ii) If the discharge causes contaminants to first enter water in a river which originates in the landholding where the discharge occurs and which conveys irrigation run-off, then the discharge does not result in the exceedance of any of the thresholds in Schedule 16A at the first of:
 - (1) The downstream boundary of the landholding where the discharge occurs; or
 - (2) Immediately before the river joins another river, lake, wetland or the coastal marine area (*refer to Figure 9*); or

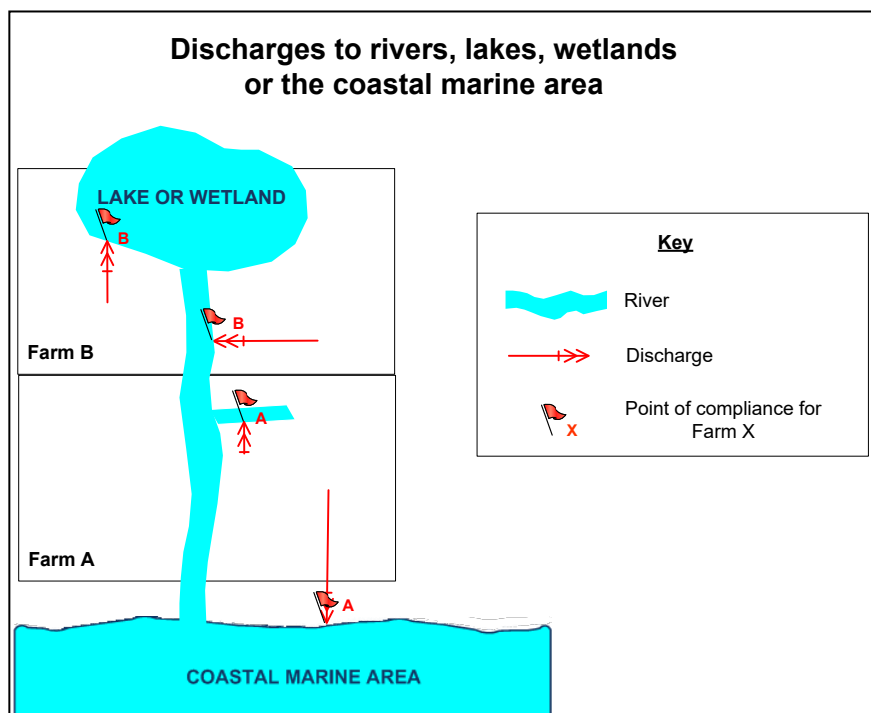


Figure 8: Implementation of Rule 12.C.1.1A(a)(i)

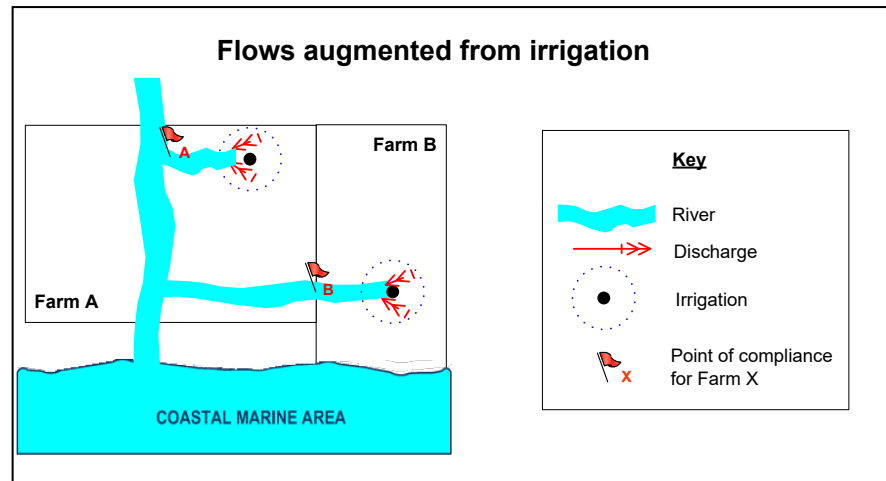


Figure 9: Implementation of Rule 12.C.1.1A(a)(ii)

- (b) If the discharge causes contaminants to first enter water in a drain that goes to a lake, river, wetland or the coastal marine area, then:
- (i) The discharge does not result in the exceedance³ of any of the thresholds in Schedule 16A within the drain at the first of:
 - (1) The downstream boundary of the landholding where the discharge occurs; or
 - (2) Immediately before the drain enters a river, lake, wetland or the coastal marine area (*refer to Figure 10*),

except:
 - (ii) If all of the dischargers to the drain have advised the Council in writing that they share responsibility for discharges from that drain, contaminants in the drain do not exceed any of the thresholds in Schedule 16A immediately before the drain enters a lake, river, wetland or the coastal marine area (*refer to Figure 11*); or

³ In determining whether the discharge results in the exceedance of any of the thresholds in Schedule 16A, the concentration of contaminants at the upstream boundary of the landholding where the discharge occurred shall be excluded.

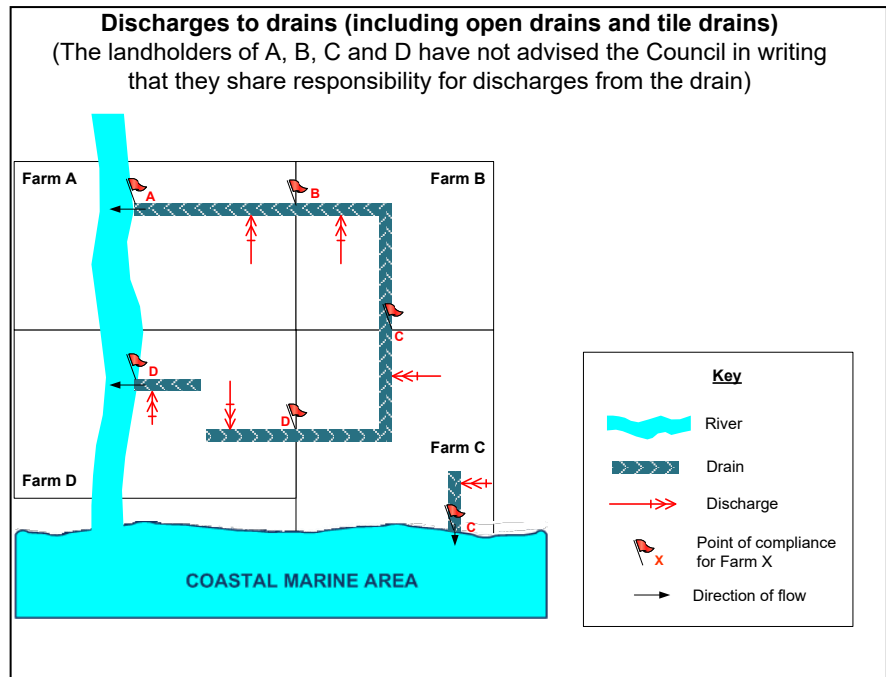


Figure 10: Implementation of Rule 12.C.1.1A(b)(i)

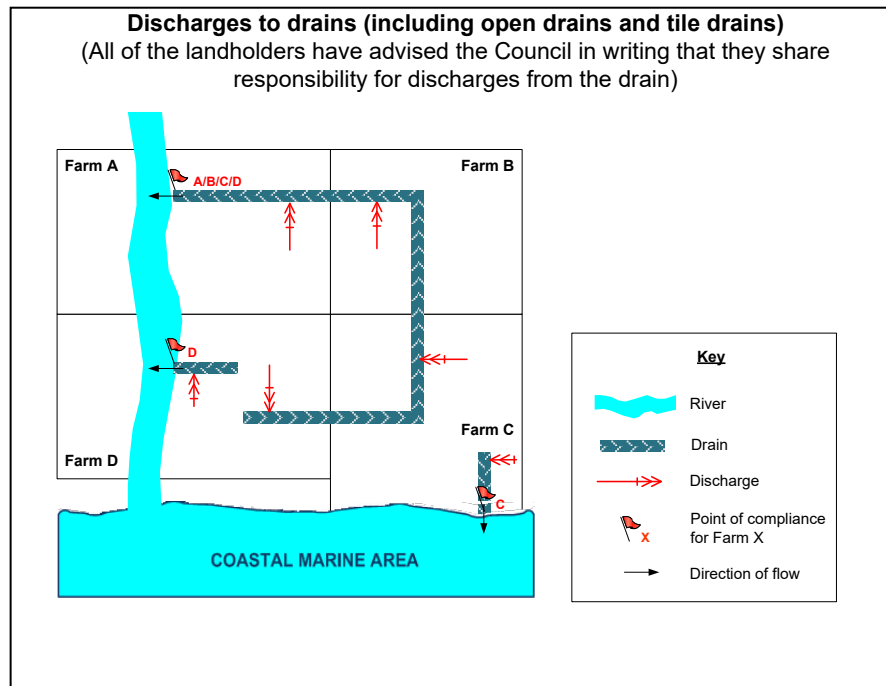


Figure 11: Implementation of Rule 12.C.1.1A(b)(ii)

- (c) If the discharge causes contaminants to first enter water in a water race that goes to a lake, river, wetland or the coastal marine area then:
- (i)
 - (1) Any measurable discharge does not exceed any of the thresholds in Schedule 16A immediately before entering the water race; and
 - (2) The cumulative contaminant discharge into the water race between the upstream boundary of the landholding where the discharge occurs and the first of:
 - (a) The downstream boundary of the same landholding; or
 - (b) Immediately before the water race enters a river, lake, wetland or the coastal marine area (*refer to Figure 12*),does not exceed any of the thresholds in Schedule 16A,

except:

- (ii) If the race operator has advised the Council in writing that it takes responsibility for discharges to the race from specified landholdings:
 - (1) Paragraph (i) does not apply to discharges from those specified landholdings; and
 - (2) Contaminants in the water race do not exceed any of the thresholds in Schedule 16A immediately before the race enters a lake, river, wetland or the coastal marine area (*refer to Figure 13*).

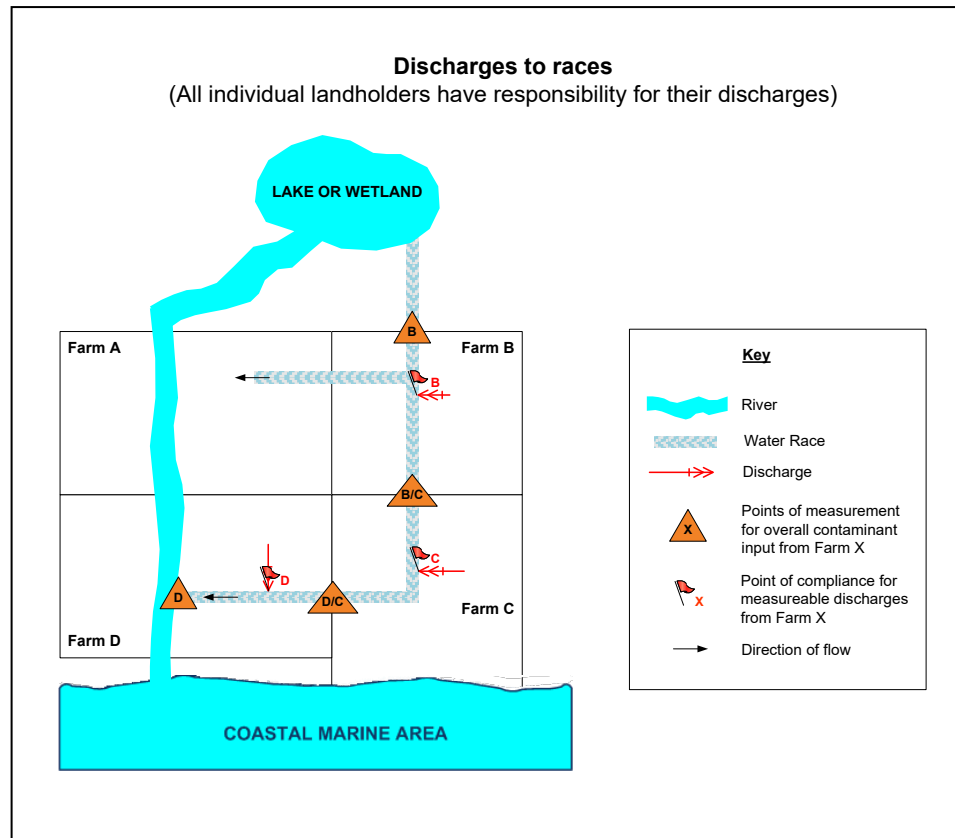


Figure 12: Implementation of Rule 12.C.1.1A(c)(i)

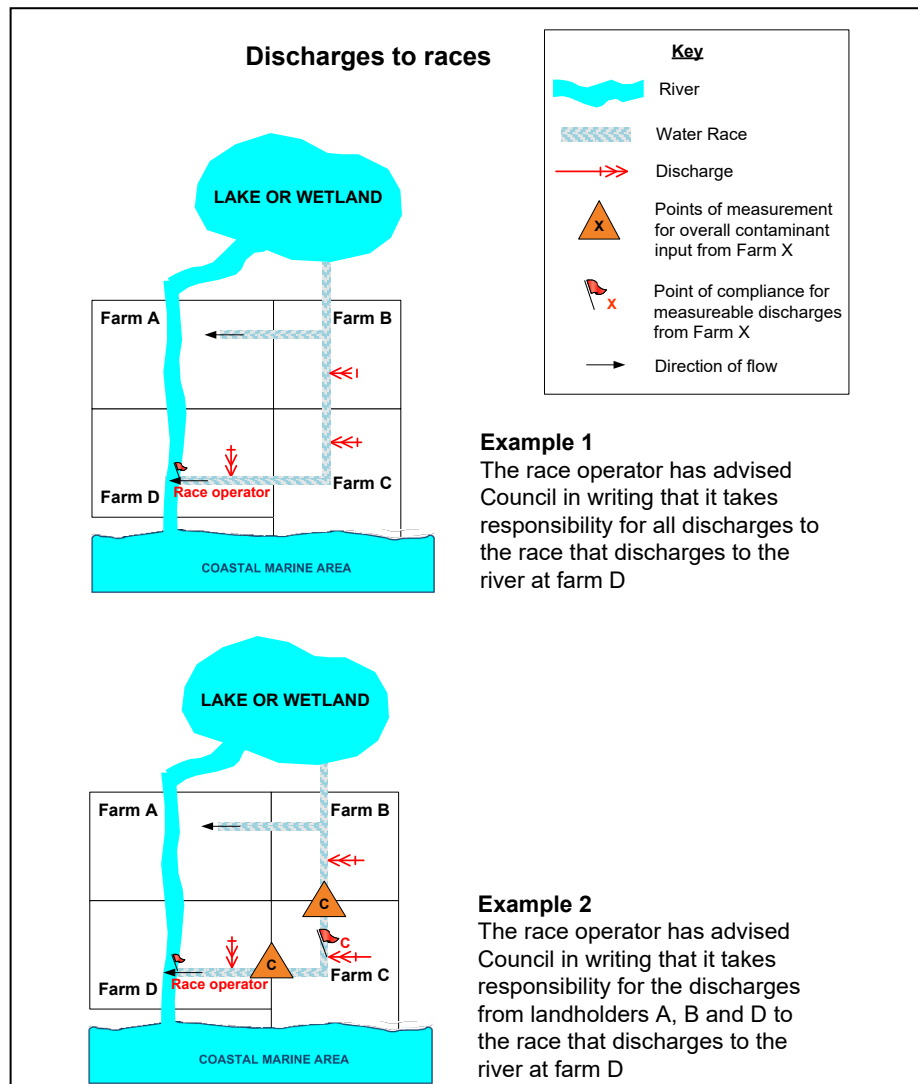


Figure 13: Implementation of Rule 12.C.1.1A(c)(ii)

12.C.1.2 Notwithstanding Rule 12.C.1.1, the discharge of water or any contaminant from the source water body through:

- (i) A water race; or
- (ii) A dam:
 - (1) Permitted under Rule 13.2.1.3; and
 - (2) Not for the purpose of the storage of contaminants, to any lake, river, wetland, or any water race or drain that flows to a lake, river or wetland, is a *permitted* activity, providing:
 - (a) The race or dam operator has not caused any contaminant to be discharged into the race or dam from which it is discharged; and
 - (b) There is no discharge of water from one catchment to water in another catchment; and
 - (c) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
 - (d) The discharge does not:
 - (1) Result in flooding, erosion, land instability or property damage; or
 - (2) Result in a conspicuous change in colour or visual clarity; or
 - (3) Have floatable or suspended materials.

12.C.1.3 The discharge of nitrogen⁴ onto or into land in circumstances which may result in nitrogen entering groundwater, is a *permitted* activity, providing:

- (a) From 1 April 2026, the nitrogen leaching rate does not exceed:
 - (i) 15 kgN/ha/year for the total area of land managed by a landholder that is located over the relevant Nitrogen Sensitive Zone identified in Maps H5 and H6; and
 - (ii) 20 kgN/ha/year for the total area of land managed by a landholder that is located over the relevant Nitrogen Sensitive Zone identified in Maps H1 to H4; and
 - (iii) 30 kgN/ha/year for the total area of land managed by a landholder that is located outside any Nitrogen Sensitive Zone identified in Maps H1 to H6, as calculated using OVERSEER[®] version 6 by a Certified Nutrient Management Advisor in accordance with OVERSEER[®] Best Practice Data Input Standards; and

⁴ For the purpose of Rule 12.C.1.3, nitrogen comprises of organic nitrogen, ammoniacal nitrogen, nitrite nitrogen and nitrate nitrogen forms.

- (b) (i) From 1 May 2014 to 31 March 2026, the landholder for outdoor pork, fruit (excluding grapes), berry and rotational vegetable production will keep a record of all inputs into the farm system and evidence that practices complied with the relevant industry good management practices and provide Council upon request with that information. From 1 April 2026, 12.C.1.3(b)(ii) will apply; and
- (ii) From 1 May 2014, in all other cases, the landholder will:
 - (1) Maintain a record of all necessary data to run OVERSEER[®] version 6; and
 - (2) Provide Council upon request with:
 - (a) All necessary data to run OVERSEER[®] version 6; or
 - (b) Any available OVERSEER[®] version 6 output and input parameter report prepared by a Certified Nutrient Management Advisor in accordance with OVERSEER[®] Best Practice Data Input Standards.

Part B
Animal waste
storage and
Application

12.C.1.4 Notwithstanding any other rule in this Plan, the discharge of animal waste, or water containing animal waste, from an animal waste system onto or into land is a *permitted* activity providing:

- (a) The animal waste system is permitted under Rule 14.7.1.2; and
- (b) The discharge is not prohibited under Rule 12.C.0.4; and
- (c) The discharge does not occur within 50 metres of the boundary of the property on which the animal waste is generated, or beyond that boundary.

12.C.2 Restricted discretionary activities: Resource consent required

12.C.2.1 The discharge of water or any contaminant:

- (i) To water; or
- (ii) Onto or into land in circumstances which may result in a contaminant entering water,

for a period up to five years, is a *restricted discretionary* activity, unless the discharge:

- (a) Is prohibited by a rule in 12.C.0; or
- (b) Is permitted by Rules 12.C.1.1, 12.C.1.1A or 12.C.1.2; or
- (c) Will result in flooding, erosion, land instability or property damage; or

- (d) Is of water from one catchment to water in another catchment; or
- (e) Will change the water level range or hydrological function of any Regionally Significant Wetland; or
- (f) Has previously been authorised by resource consent granted under this rule.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.2 The discharge of water or any contaminant:

- (i) To water; or
- (ii) Onto or into land in circumstances which may result in a contaminant entering water,

for a period up to two years, from a short-term activity with a short-term effect, is a *restricted discretionary* activity, unless the discharge:

- (a) Is prohibited by a rule in 12.C.0; or
- (b) Is permitted by Rules 12.C.1.1, 12.C.1.1A or 12.C.1.2; or
- (c) Will result in flooding, erosion, land instability or property damage; or
- (d) Is of water from one catchment to water in another catchment; or
- (e) Will change the water level range or hydrological function of any Regionally Significant Wetland.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.3 The discharge of nitrogen⁵ onto or into land in circumstances which may result in nitrogen entering groundwater for a period up to five years is a *restricted discretionary* activity, unless the discharge:

- (a) Is prohibited by a rule in 12.C.0; or
- (b) Is permitted by Rule 12.C.1.3, or

⁵ For the purpose of Rule 12.C.2.3, nitrogen comprises of organic nitrogen, ammoniacal nitrogen, nitrite nitrogen and nitrate nitrogen forms.

- (c) Has previously been authorised by a resource consent granted under this rule.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.4 Restricted discretionary activity discretions

In considering any resource consent in terms of Rules 12.C.2.1 to 12.C.2.3, the Council will restrict the exercise of its discretion to:

- (a) The nature, type, volume, frequency and location of the discharge; and
- (b) The concentration and loading of contaminants in the discharge; and
- (c) In the case of an application under Rules 12.C.2.1 and 12.C.2.3, the staged timeframe for achieving the permitted activity conditions in Rules 12.C.1.1, 12.C.1.1A or 12.C.1.3; and
- (d) In the case of an application under 12.C.2.2, the staged timeframe to address adverse effects on water quality; and
- (e) In the case of an application previously consented under Rule 12.C.2.2, compliance with conditions of the previous resource consent; and
- (f) Any change to infrastructure and the staging of implementation of those changes; and
- (g) Any adverse effect on water quality, including cumulative effects, and consideration of trends in the quality of the receiving water; and
- (h) Any adverse effect of the discharge on any natural or human use value, including Kāi Tahu values and use of the coastal marine area for contact recreation and seafood gathering; and
- (i) The need for and extent of any mixing zone; and
- (j) Any co-ordination of discharges across multiple landholdings; and
- (k) The extent to which the contaminant results from the activities of the applicant; and
- (l) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (m) Any erosion, land instability, sedimentation or property damage resulting from the discharge; and
- (n) Any financial contribution for any Regionally Significant Wetland or on any regionally significant wetland value; and

- (o) The information and monitoring requirements; and
- (p) The duration of the resource consent; and
- (q) The review of conditions of the resource consent.

Part B
Animal waste
storage and
Application

12.C.2.5 The discharge of animal waste, or water containing animal waste, from an animal waste system onto or into land is a *restricted discretionary* activity provided:

- (a) The discharge is not prohibited under Rule 12.C.0.2A; and
- (b) The discharge is not permitted under Rule 12.C.1.4;

In considering any resource consent under this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (i) The application depth and rate;
- (ii) Size and location of the disposal area, including separation distances from lakes, rivers, Regionally Significant Wetlands, bores, soak holes, water supply for human consumption and dwellings;
- (iii) Measures to avoid, remedy or mitigate adverse effects on water quality, taking into account the nature and sensitivity of the receiving environment;
- (iv) Measures to avoid, remedy or mitigate adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses;
- (v) Duration of consent and any review conditions;
- (vi) Quality of, and compliance with, a management plan for the animal waste system; and
- (vii) Any information and monitoring requirements.

12.C.3 Discretionary activities: Resource consent required

12.C.3.1 The discharge of water from one catchment to water in another catchment is a *discretionary* activity.

12.C.3.2 The discharge of water or any contaminant:

- (i) To water; or
- (ii) Onto or into land in circumstances which may result in a contaminant entering water

is a *discretionary* activity, unless it is:

- (a) Prohibited by a rule in 12.C.0; or
- (b) Permitted by a rule in 12.C.1; or
- (c) Provided for by a rule in 12.C.2.

R U L E S : W A T E R T A K E , U S E A N D M A N A G E M E N T

13

Rules: Land Use on Lake or River Beds or Regionally Significant Wetlands



- Note: 1. Where the rules in this chapter provide for any activity in the bed of a lake or river, or in any Regionally Significant Wetland, a resource consent may also be required for activities associated with it, such as discharges to water, takes of water, damming or diversion of water, bed disturbance or structures.
2. A wetland may include open water which is part of a lake.

13.1 The use of a structure

13.1.1 Permitted activities: No resource consent required

13.1.1.1 The use of any structure that is fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The structure is lawfully established; and
- (b) In the case of a change in use, the effects of the new use of the structure are the same or similar in character, intensity and scale as the preceding use; and
- (c) Measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland; and
- (d) The structure is maintained in good repair.

13.1.2 Restricted discretionary activities: Resource consent required

13.1.2.1 Except as provided for by Rule 13.1.1.1, the use of a structure that is fixed in, on under or over the bed of any lake or river, or any Regionally Significant Wetland, is a *restricted discretionary* activity.

In considering any resource consent for the use of any structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any adverse effect on the function or structural integrity of the structure; and
- (b) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland; and
- (c) The duration of the resource consent; and
- (d) The information and monitoring requirements; and
- (e) Any insurance or other appropriate means of remedying the effects of failure; and
- (f) Any bond; and
- (g) The review of conditions of the resource consent.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

Principal reasons for adopting

The use of a structure that is fixed in, on, under, or over the bed of any lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

The use of any structure under Rule 13.1.1.1 is likely to have less adverse effect than the structure itself. This rule is adopted to enable the use of structures while ensuring that any change in use does not result in new or increased effects. Any other activity involving the use of a structure that is fixed in, on, under, or over the bed of any lake or river is a restricted discretionary activity in order that any adverse effects can be assessed.

13.2 The erection or placement of a structure

13.2.1 Permitted activities: No resource consent required

Note: Any alteration of the bed of a lake or river, or of any Regionally Significant Wetland, in association with the following activities must also comply with Rules under 13.5 in order to be classified as a permitted activity.

- 13.2.1.1 The erection or placement of any fence, pipe, line or cable over the bed of a lake or river, or a Regionally Significant Wetland, is a *permitted* activity, providing:
- (a) The fence, pipe, line or cable does not cross a lake or river identified in Schedule 1A as being an “Outstanding natural feature or landscape” unless it is attached to an existing lawfully established support structure; and
 - (b) No part of the fence, pipe, line or cable is fixed to the bed of the lake or river unless it is attached to an existing lawfully established support structure; and
 - (c) No part of any pipe, line or cable is less than two metres above the 1 percent probability flood level, unless it is attached to an existing lawful structure; and
 - (d) Where it is attached to an existing lawful structure, no part of any pipe, line or cable extends below the underside of the existing structure; and
 - (e) Any fence over the bed of a lake or river, or a wetland, does not impede the flow of flood water or debris, or is installed and maintained so it results in no flooding or erosion of the bed or banks of the lake or river, or of a wetland; and
 - (f) The fence, pipe, line or cable does not interfere with navigation; and

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- (g) For existing overhead network utility services over the bed of a lake or river, there is no reduction in the height of clearance above the waterway; and
- (h) The fence, pipe, line or cable is maintained in good repair.

13.2.1.2 The placement of any pipe, line, or cable on or under the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The pipe, line, or cable does not impede the flow of water or debris, or is installed and maintained so it results in no flooding, erosion or sedimentation; and
- (b) The location of the pipe, line, or cable is identified by markers on the banks of the river or lake; and
- (c) The pipe, line, or cable is maintained in good repair.

13.2.1.3 The erection or placement of any structure for the damming of water that is fixed in or on the bed of any lake or river is a *permitted* activity, providing:

- (a) The conditions of Rule 12.3.2.1 are met; and
- (b) The Otago Regional Council is notified of the location and nature of the dam, at least seven working days prior to commencing the erection or placement; and
- (c) The structure is maintained in good repair; and
- (d) The site is left tidy following the erection or placement.

Note: The erection of a dam structure is a different activity to the damming of water. The damming of water is covered by rules under 12.3 of this Plan.
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13.2.1.4 The erection or placement of any flow or level recording device, outfall or intake structure or navigational aid structure, that is fixed in, on or under the bed of any lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The structure does not exceed 2 square metres in area provided that in respect of any flow or level recording device any catwalk to the nearest bank shall be excluded from the area calculation; and
- (b) The structure, or its erection or placement, does not cause any flooding or erosion; and
- (c) The Otago Regional Council is notified of the location and nature of the structure, at least seven working days prior to commencing the erection or placement; and

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- (d) Except in the case of a navigational aid, or the sight board of any gauge, any visible part of the structure is of a neutral colour to blend in with the surroundings; and
- (e) The structure is maintained in good repair; and
- (f) The site is left tidy following the erection or placement.

13.2.1.5 The erection or placement of any maimai that is fixed in, on or under the bed of any lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The structure does not exceed 10 square metres in area; and
- (b) The structure is open piled; and
- (c) The structure is at least 90 metres from any adjacent maimai; and
- (d) The site is left tidy following the erection or placement.

13.2.1.6 The erection or placement of any whitebait stand or eel trap that is fixed in, on or under the bed of any lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The structure is open piled; and
- (b) The structure does not exceed three square metres in area; and
- (c) The dimension of the structure perpendicular to the flow of water is no more than 10 percent of the width of the bed of the lake or river, or no more than three metres, whichever is the lesser; and
- (d) The structure is at least 20 metres from any neighbouring structure, flood gate, confluence or culvert located within the bed of a lake or river; and
- (e) In the case of a whitebait stand, the structure is erected or placed in or on the bed of the Clutha River/Mata-Au, or its branches; and
- (f) The site is left tidy following the erection or placement.

13.2.1.7 The erection or placement of any single span bridge including for pipes over the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The bridge or its erection or placement, does not cause any flooding, nor cause any erosion of the bed or banks of the lake or river, or Regionally Significant Wetland, or property damage; and
- (b) No more than 20 metres of bridge occurs on any 250 metre stretch of any lake or river; and

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- (c) There is no reduction in the flood conveyance of the lake, river or Regionally Significant Wetland; and
- (d) The bridge soffit is no lower than the top of the higher river bank; and
- (e) The bridge and its abutments are secured against bed erosion, flood water and debris loading; and
- (f) Where the bridge is intended for use by stock, measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland; and
- (g) If the bridge is situated over or on public land, then public access over the public land is maintained.

13.2.1.7A The erection or placement of any boardwalk in, on or over a Regionally Significant Wetland, is a *permitted* activity, providing the erection or placement, or the boardwalk, does not cause any flooding, nor any erosion.

13.2.1.7B Unless covered by Rule 13.2.1.7 or 13.2.1.7A, the erection or placement of any crossing in or on the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity, providing:

- (a) The crossing, or its erection or placement, does not cause any flooding, nor cause erosion of the bed or banks of the lake, river or Regionally Significant Wetland, or property damage; and
- (b) The top of the crossing is no higher than:
 - (i) 2 metres above the lowest part of the bed where it is located; or
 - (ii) 3.5 metres above the lowest part of the bed where it is located, if the catchment upstream of the crossing is 50 hectares or less in area and there is a culvert with a minimum diameter of 1.2 metres (or equivalent cross-sectional area); and
- (c) No more than 24 metres of crossing occurs on any 250 metre stretch of any lake or river, with a minimum separation distance between any two crossings in or on the same lake or river of 12 metres; and
- (d) There is no reduction in the flood conveyance of the lake, river or Regionally Significant Wetland; and
- (e) The crossing and any ancillary structures are stable under flood conditions, and secured against bed erosion and debris loading; and
- (f) Fish passage is retained; and
- (g) Movement of bed material is not impeded; and

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- (h) Where the crossing is intended for use by stock, measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland; and
- (i) If the crossing is situated over or on public land, then public access over the public land is maintained.

13.2.1.8 The placement of a floating boom in, on or over the bed of a lake, or any Regionally Significant Wetland, is a *permitted* activity, providing that for the bed of any lake:

- (a) The boom is securely fixed to the bed or margins of the lake; and
- (b) The boom is not more than 850 metres upstream of a lawfully established hydro-electric dam or control structure or within 200 metres of any other lawfully established dam or control structure; and
- (c) The boom is maintained at all times in a safe condition, good repair and substantially free of debris; and
- (d) The boom and all associated equipment are clearly visible.

13.2.2 Restricted discretionary activities: Resource consent required

13.2.2.1 Except as provided for by Rules 13.2.1.1, 13.2.1.2 and 13.2.1.5 to 13.2.1.7B, the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or crossing in, on, under, or over the bed of any lake or river, or the erection or placement of any fence, pipe, line, cable, jetty, bridge, crossing or boardwalk in, on, under or over any Regionally Significant Wetland, is a *restricted discretionary* activity.

In considering any resource consent for the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or crossing in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any adverse effects of the activity on:
 - (i) Any natural and human use value identified in Schedule 1 for any affected water body; and
 - (ii) The natural character of any affected water body; and
 - (iii) Any amenity value supported by any affected water body; and
 - (iv) Any heritage value associated with any affected water body; and
- (b) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) Flow and sediment processes; and

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- (d) Any adverse effect on a defence against water; and
- (e) Any adverse effect on existing public access; and
- (f) Fish passage; and
- (g) The method of construction; and
- (h) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland; and
- (i) The duration of the resource consent; and
- (j) The information and monitoring requirements; and
- (k) Any existing lawful activity associated with any affected water body; and
- (l) Any bond; and
- (m) The review of conditions of the resource consent; and
- (n) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.2.3 Discretionary activities: Resource consent required

- 13.2.3.1 Except as provided for by Rules 13.2.1.1 to 13.2.2.1, the erection or placement of any structure fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a *discretionary* activity.

Principal reasons for adopting

The erection or placement of a structure that is fixed in, on, under, or over the bed of any lake, river or Regionally Significant Wetland can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

The erection or placement of structures under Rules 13.2.1.1 to 13.2.1.7B will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, since the structures are suspended clear of the lake or river, or are small or open piled. These rules are adopted to enable such structures to be erected or placed while providing protection for those values and the interests of those people. Any other activity involving the erection or placement of any structure, that is fixed in, on, under, or over the bed of any lake or river is either a restricted discretionary or a discretionary activity in order that any adverse effects can be assessed.

13.3 The repair, maintenance, extension, alteration, replacement or reconstruction of a structure

13.3.1 Permitted activities: No resource consent required

Note: Any alteration of the bed of a lake or river, or of any Regionally Significant Wetland, in association with the following activities must also comply with Rules under 13.5 in order to be classified as a permitted activity.

- 13.3.1.1 The repair or maintenance of any lawful structure in, on, under or over the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity providing:
- (a) There is no permanent change to the scale, nature or functions of the structure.
- 13.3.1.2 The extension, alteration, replacement or reconstruction of any lawful structure in, on, under or over the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity providing:
- (a) In the case of a replacement or reconstruction, the structure is replaced or reconstructed in the same location as the original structure; and
 - (b) There is no permanent change to the scale, nature or functions of the structure, except where a rule under 13.2.1 applies to that structure and the conditions of that rule are met.

13.3.2 Restricted discretionary activities: Resource consent required

- 13.3.2.1 Except as provided for by Rules 13.3.1.1 and 13.3.1.2, the extension, alteration, replacement or reconstruction of any structure, fixed in, on, under or over the bed of any lake or river, or any Regionally Significant Wetland, is a *restricted discretionary* activity.

In considering any resource consent for the extension, alteration, replacement or reconstruction of any structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any adverse effects of the activity on:
 - (i) Any natural and human use value identified in Schedule 1 for any affected water body; and
 - (ii) The natural character of any affected water body; and
 - (iii) Any amenity value supported by any affected water body; and
 - (iv) Any heritage value associated with any affected water body; and

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- (b) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) Flow and sediment processes; and
- (d) Any adverse effect on a defence against water; and
- (e) Any adverse effect on existing public access; and
- (f) The method of construction; and
- (g) The duration of the resource consent; and
- (h) The information and monitoring requirements; and
- (i) Any existing lawful activity associated with any affected water body; and
- (j) Any insurance or other appropriate means of remedying the effects of failure; and
- (k) Any bond; and
- (l) A financial contribution if the structure is a dam, or for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and
- (m) The review of conditions of the resource consent; and
- (n) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

Principal reasons for adopting

The extension, alteration, replacement or reconstruction of a structure that is fixed in, on, under, or over the bed of any lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act). Repair or maintenance is allowed under Rule 13.3.1.1 provided there is no permanent change to the scale, nature or functions of the structure.

The work able to be carried out on structures under Rules 13.3.1.1 and 13.3.1.2 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, since there is no significant change to the structure. These rules are adopted to enable such structures to be repaired, maintained, extended, altered, replaced or reconstructed while providing protection for those values and the interests of those people. Any other activity involving the extension, alteration, replacement or reconstruction of structure, that is fixed in, on, under, or over the bed of any lake or river is a restricted discretionary activity in order that any adverse effects can be assessed.

13.4 Demolition or removal of a structure

13.4.1 Permitted activities: No resource consent required

Note: Any alteration of the bed of a lake or river, or any Regionally Significant Wetland, in association with the following activities must also comply with Rules under 13.5 in order to be classified as a permitted activity.

- 13.4.1.1 The demolition or removal of any structure or any part of a structure that is fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a *permitted* activity providing:
- (a) Where any part of the structure remains in situ, nothing remains above the level of the bed; and
 - (b) The structure is not identified as a registered historic place, a building or place identified in any district plan as being of historic value, an archaeological site or a place with interim historic place registration; and
 - (c) The structure is not a sacred place identified by Kai Tahu and located in any area identified as MA3 in Schedule 1D; and
 - (d) There is no use of explosives; and
 - (e) The Otago Regional Council is notified of the demolition or removal, at least seven working days prior to commencing the activity; and
 - (f) The demolition or removal of the structure does not cause any erosion; and
 - (g) The site is left tidy following the demolition or removal; and
 - (h) In the case of any dam structure, the dam is no more than 3 metres high, and the volume of water stored by the dam is no more than 20,000 cubic metres; and
 - (i) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
 - (j) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

13.4.2 Restricted discretionary activities: Resource consent required

- 13.4.2.1 Except as provided for by Rule 13.4.1.1, the demolition or removal of any structure or any part of a structure that is fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a *restricted discretionary* activity.

In considering any resource consent for the demolition or removal of any structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

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- (a) Any adverse effects of the activity on:
 - (i) Any natural and human use value identified in Schedule 1 for any affected water body;
 - (ii) The natural character of any affected water body;
 - (iii) Any amenity value supported by any affected water body; and
 - (iv) Any heritage value associated with any affected water body; and
- (b) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) Flow and sediment processes; and
- (d) Any adverse effect on a defence against water; and
- (e) Any adverse effect on existing public access; and
- (f) The method of demolition or removal; and
- (g) The duration of the resource consent; and
- (h) The information and monitoring requirements; and
- (i) Any existing lawful activity associated with any affected water body; and
- (j) Any bond; and
- (k) The review of conditions of the resource consent; and
- (l) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

Principal reasons for adopting

The demolition or removal of a structure that is fixed in, on, under, or over the bed of any lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

The demolition or removal of a structure under Rule 13.4.1.1 will have less adverse effect than if the structure remained in the bed. This rule is adopted to enable such demolition or removal to occur while providing protection for the natural and human use values supported by the water body and other persons. Any other activity involving the demolition or removal of a structure, that is fixed in, on, under, or over the bed of any lake or river is a restricted discretionary activity in order that any adverse effects can be assessed.

13.5 Alteration of the bed of a lake or river, or of a Regionally Significant Wetland

13.5.A General rules for section 13.5

- 13.5.A.1 Discharges of bed material resulting from the alteration of the bed of a lake or river, or a Regionally Significant Wetland, are addressed only through rules in section 13.5.

Note: Alteration includes any disturbance, and the associated remobilisation (discharge) and redeposition (deposit) of bed material already present, reclamation or deposition of cleanfill associated with works in the bed.

13.5.1 Permitted activities: No resource consent required

- 13.5.1.1 The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, and any resulting discharge or deposition of bed material associated with:

- (i) The erection, placement, extension, alteration, replacement, reconstruction, repair, maintenance, demolition or removal, of any structure that is fixed in, on, under or over the bed of any lake or river, or the wetland; or
- (ii) The clearance of debris or alluvium from within, or immediately surrounding, any structure in order to safeguard the function or structural integrity of the structure; or
- (iii) The maintenance or reinstatement of a water intake, in order to enable the exercise of a lawful take of water,

is a *permitted* activity, providing:

- (a) Except in the case of the demolition or removal of a structure, the structure is lawfully established; and
- (b) Except in the case of (i), there is no increase in the scale of the existing structure; and
- (c) If work is undertaken between 1 May and 30 September inclusive, the Department of Conservation and the relevant Fish and Game Council will be notified as soon as reasonably practicable in advance; and
- (d) The bed or wetland disturbance is limited to the extent necessary to undertake the work; and
- (e) The bed or wetland disturbance does not cause any flooding or erosion; and
- (f) The time necessary to carry out and complete the whole of the work within the wetted bed of the lake or river does not exceed 10 hours in duration; and

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- (g) All reasonable steps are taken to minimise the release of sediment to the lake or river during the disturbance, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 200 metres downstream of the disturbance; and
- (h) No lawful take of water is adversely affected as a result of the bed or wetland disturbance; and
- (i) The site is left tidy following completion of the activity; and
- (j) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (k) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

13.5.1.2 The disturbance of the bed of any river for the purpose of clearing any material that has accumulated as a result of a storm event, excluding alluvium, in order to maintain the flood carrying capacity of the bed of the river, and any resulting discharge or deposition of bed material, is a *permitted* activity, providing:

- (a) The bed disturbance is limited to the extent necessary to clear the debris; and
- (b) The bed disturbance does not cause any flooding or erosion; and
- (c) The time necessary to carry out and complete the whole of the work within the wetted bed does not exceed 10 hours in duration; and
- (d) All reasonable steps are taken to minimise the release of sediment to the lake or river during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 200 metres downstream of the disturbance; and
- (e) No lawful take of water is adversely affected as a result of the bed disturbance; and
- (f) The site is left tidy following completion of the activity.

13.5.1.3 The disturbance or reclamation of, or the deposition of any substance in, on or under, either the bed of any lake or river, or any Regionally Significant Wetland, and any resulting discharge of bed material, for the purpose of:

- (i) The erection, placement, extension, alteration, replacement, reconstruction, repair, maintenance, demolition or removal, of any structure carried out under Rules 13.2.1.1 to 13.2.1.7B, 13.3.1.1, 13.3.1.2 or 13.4.1.1; or

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- (ii) The repair or maintenance of any defence against water constructed or placed by artificial means,

is a *permitted* activity providing:

- (a) The structure or defence against water is lawfully established; and
- (b) There is no change to the original scale of the structure or defence against water; and
- (c) The time necessary to carry out and complete the whole of the work within the wetted bed of the lake or river does not exceed 10 hours in duration; and
- (d) All reasonable steps are taken to minimise the release of sediment to the lake, river or wetland during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 200 metres downstream of the activity; and
- (e) No lawful take of water is adversely affected as a result of the activity; and
- (f) In the case of reclamation or deposition, only cleanfill is used; and
- (g) The site is left tidy following completion of the activity; and
- (h) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (i) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

13.5.1.4 The disturbance or reclamation of, or the deposition of any substance in, on or under, the bed of any lake or river, for the purpose of the reinstatement of any bank of a lake or river which has been eroded by a flood event, and any resulting discharge of bed material, is a *permitted* activity providing:

- (a) There is no change to the scale of the bank existing before the flood event; and
- (b) The activity is carried out within twelve months of the flood event that caused the erosion; and
- (c) The time necessary to carry out and complete the whole of the work within the wetted bed does not exceed 10 hours in duration; and
- (d) All reasonable steps are taken to minimise the release of sediment to the lake or river during the activity, and there is no conspicuous change in the colour or visual clarity of the

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water body beyond a distance of 200 metres downstream of the activity; and

- (e) No lawful take of water is adversely affected as a result of the repair or maintenance; and
- (f) In the case of reclamation or deposition, only cleanfill is used; and
- (g) The site is left tidy following completion of the activity.

13.5.1.5 The disturbance of the bed of any lake or river associated with the control of aquatic pest plants, and any resulting discharge or deposition of bed material, is a *permitted* activity providing:

- (a) The control is carried out under Rule 13.7.1.1, or under a resource consent; and
- (b) The bed disturbance is limited to that which is necessary for the removal of the plant material.

13.5.1.5A The alteration of any Regionally Significant Wetland, associated with the introduction, planting, removal or clearance of plant material is a *permitted* activity providing:

- (a) The introduction, planting, removal or clearance is carried out under Rule 13.6.2.0 or 13.7.1.2, or
- (b) The introduction, planting, removal or clearance is carried out under a resource consent.

13.5.1.5B The disturbance of any Regionally Significant Wetland, for the purpose of drain maintenance, and any resulting discharge or deposition of bed material, is a *permitted* activity, providing:

- (a) The disturbance is limited to that necessary to address water accumulating on land outside of any Regionally Significant Wetland; and
- (b) The drain was lawfully constructed on or before 2 July 2011; and
- (c) The drain has been maintained within the preceding 15 years; and
- (d) There is no increase in the drain dimensions from the last maintenance; and
- (e) All reasonable measures are taken to minimise the release of sediment to any water body during the disturbance, and there is no conspicuous change in the colour or visual clarity of any water body beyond a distance of 100 metres downstream of the disturbance; and
- (f) All reasonable steps are taken to minimise damage to fauna and New Zealand native flora; and

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- (g) At least ten working days prior to commencing the maintenance, the Otago Regional Council is given notice of the location and date of the drain maintenance; and
 - (h) Within ten working days after the drain maintenance is carried out, the Otago Regional Council is provided with:
 - (i) Photographs of:
 - (a) The drain immediately before and after maintenance; and
 - (b) The wetland adjoining the drain being maintained, showing vegetation cover; and
 - (ii) Dimensions (longitude and cross-section) of the drain immediately before and after maintenance; and
 - (iii) A map or line diagram identifying the location and course of the drain.
- 13.5.1.6 Except as provided for by Rule 13.5.1.1, the extraction of alluvium within the bed of a river is a *permitted* activity, providing:
- (a) No person takes more than 20 cubic metres in any month; and
 - (b) The alluvium is not taken from the wet bed of the river and the surface of the remaining alluvium is not left lower than the level of the water in the river; and
 - (c) The area from which the material is taken is smoothed over, as far as practicable; and
 - (d) The activity is not carried out within 20 metres of any structure which has foundations in the river bed, or any ford or pipeline; and
 - (e) No material is taken directly from the bank or from any defence against water.
- 13.5.1.7 Suction dredge mining within the bed of a river is a *permitted* activity providing:
- (a) The internal diameter of the nozzle does not exceed 150 mm; and
 - (b) The mining activity does not occur in those rivers, or parts of rivers, listed in Schedule 7 during any identified time period; and
 - (c) The mining activity is not carried out within 20 metres of any structure which has foundations in the river bed, or any ford or pipeline; and
 - (d) The activity does not cause any flooding or erosion; and
 - (e) No refuelling is carried out while the dredge is within the wet bed of the river unless an effective spill tray has been installed; and

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- (f) The area dredged lies within the wet bed of the river, and no material is removed from within or under the banks of the river; and
- (g) No suction dredge is operated within 500 metres of another dredge; and
- (h) No explosives or earthmoving machinery apart from the dredge is used to move material in the river bed; and
- (i) Any rocks moved to allow suction dredging to occur are returned as close as possible to the site from which they were removed; and
- (j) There is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 100 metres downstream of the point of discharge of the dredge; and
- (k) No lawful take of water is adversely affected as a result of the bed disturbance.

13.5.1.8 [Repealed – 1 May 2014]

13.5.1.8A The disturbance of the bed of any lake or river, or any Regionally Significant Wetland by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a **permitted** activity, providing ~~it does not~~:

Part E
Stock access
to water

- (a) It does not
 - (i) Involve feeding out on that bed or wetland; or
 - (~~bi~~) Cause or induce noticeable slumping, pugging or erosion; or
 - (~~ei~~iii) Result in a visual change in colour or clarity of water; or
 - (~~di~~iv) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
- (b) From 2022:
 - (i) All dairy cattle and pigs are excluded from the beds of lakes, continually flowing rivers wider than 1 metre and Regionally Significant Wetlands; and
 - (ii) where stock are excluded under (i), a setback of five metres from the beds of lakes, continually flowing rivers wider than 1 metre and Regionally Significant Wetlands is implemented.

Note: 1. For the purposes of Rule 13.5.1.8A(b), a continually flowing river is considered to be wider than 1 metre if the river is wider than 1 metre at any point within the boundary of a landholding at its annual fullest flow without overtopping its banks.

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2. For the purposes of Rule 13.5.1.8A(b)(ii), setbacks are measured from the edge of the wetted bed of a lake or river wider than 1 metre or Regionally Significant Wetland and are averaged across the landholding.

13.5.1.8B The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, by livestock where they are being intentionally driven, and any resulting discharge or deposition of bed material, is a *permitted* activity, providing there is no:

- (a) Existing structure available for use; or
- (b) Visual change in colour or clarity of water, after the disturbance ceases; or
- (c) Noticeable slumping, pugging or erosion.

13.5.1.9 The drilling of land on the bed of any lake or river, other than for the purpose of creating a bore, and any disturbance of the bed associated with that drilling, and any resulting discharge or deposition of bed material, is a *permitted* activity providing:

- (a) The bed disturbance is limited to the extent necessary for the drilling; and
- (b) The drill hole is filled or sealed on completion of the work so that contaminants are prevented from entering the hole at any level; and
- (c) The activity does not occur in the wet bed; and
- (d) The site is left tidy following completion of the activity.

13.5.1.10 The disturbance of the bed of any ephemeral or intermittently flowing river for the purpose of constructing or maintaining a sediment trap is a *permitted* activity providing:

Part F
Sediment
traps

- (a) The construction or maintenance of the sediment trap is undertaken solely for sediment control purposes or to maintain the capacity and effective functioning of the sediment trap; and
- (b) The construction or maintenance does not result in destabilisation of any lawfully established structure or cause increased risk of flooding or erosion; and
- (c) The works do not occur in flowing water; and
- (d) The sediment trap cannot be accessed by livestock; and
- (e) Any build-up of sediment and other debris (including vegetation) within the sediment trap is removed as soon as practicable; and
- (f) All reasonable steps are taken to minimise the release of sediment to the ephemeral or intermittently flowing river during the disturbance and there is no conspicuous change

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in the colour or clarity of the water body beyond a distance of 200 metres downstream of the disturbance; and

- (g) No lawful take of water is adversely affected as a result of the disturbance; and
- (h) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
- (i) There is no damage to fauna or New Zealand native flora in or on any Regionally Significant Wetland.

13.5.2 Restricted discretionary activities: Resource consent required

13.5.2.1 Except as provided for by Rules 13.5.1.1 and 13.5.1.6, the extraction of alluvium within the bed of a lake or river, or within any Regionally Significant Wetland, is a *restricted discretionary* activity.

In considering any resource consent for the extraction of alluvium in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any adverse effects of the activity on:
 - (i) Any natural and human use value identified in Schedule 1 for any affected water body;
 - (ii) The natural character of any affected water body;
 - (iii) Any amenity value supported by any affected water body; and
 - (iv) Any heritage value associated with any affected water body; and
- (b) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected;
- (d) Any adverse effect on a defence against water; and
- (e) The quantity of alluvium to be extracted, and the location and the method of removal; and
- (f) Any adverse effect on existing public access; and
- (g) The duration of the resource consent; and
- (h) The information and monitoring requirements; and
- (i) Any existing lawful activity associated with any affected water body; and
- (j) Any bond; and
- (k) The review of conditions of the resource consent.

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Except in the case of extraction from the wet bed of a lake or river, or within a Regionally Significant Wetland, the Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.5.3 Discretionary activities: Resource consent required

13.5.3.1 Except as provided for by Rules 13.5.1.1 to 13.5.2.1 the alteration of the bed of any lake or river is a *discretionary* activity.

13.5.3.2 Unless covered by Rules 13.5.1.1, 31.5.1.3, 13.5.1.5A, 13.5.1.5B, 13.5.1.8A, 13.5.1.8B or 13.5.2.1, the alteration of any Regionally Significant Wetland, is a *discretionary* activity.

Principal reasons for adopting

The alteration of the bed of a lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

No person may disturb, remove, damage, or destroy any plant or part of any plant (whether exotic or indigenous) or the habitats of any such plants or of animals in, on, or under the bed of any lake or river in a manner that contravenes a rule in a regional plan or proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use allowed by Section 20A of the Act (Resource Management Act Section 13(2)(b)).

Rules 13.5.2.1 and 13.5.3.1 provide for the preservation of the natural state of the shoreline of Lake Wanaka, consistent with Section 4 (c) of the Lake Wanaka Preservation Act 1973.

The alteration of the bed of a lake or river under Rules 13.5.1.1 to 13.5.1.9 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, since the activities involve minimal disturbance of the bed. Any other activity involving the alteration of the bed of a lake or river is either a restricted discretionary or a discretionary activity in order that any adverse effects can be assessed.

13.6 The introduction or planting of vegetation

Note: The Otago Regional Council's Pest Management Strategy 2009 addresses the management of pest plants in Otago under the Biosecurity Act 1993. The Biosecurity Act 1993 bans a number of aquatic plants that have been declared unwanted organisms, from sale, distribution and propagation.

13.6.1 Prohibited activities: No resource consent granted

13.6.1.1 The introduction of material of the following species:

- (i) Lagarosiphon *Lagarosiphon major*; or
- (ii) Eel Grass *Vallisneria spiralis*; or

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- (iii) *Egeria Egeria densa*; or
- (iv) Hornwort *Ceratophyllum demersum*; or
- (v) Hydrilla *Hydrilla verticillata*; or
- (vi) *Sagittaria Sagittaria graminea ssp platyphylla*; or
- (vii) *Spartina Spartina anglica*; or
- (viii) *Salvinia Salvinia molesta*; or
- (ix) Water Hyacinth *Eichhornia crassipes*; or
- (x) Water Lettuce *Pistia stratiotes*,

to the bed or water of any Otago lake, river, or any Regionally Significant Wetland, is a **prohibited** activity for which no resource consent will be granted.

13.6.2 Permitted activities: No resource consent required

13.6.2.0 The introduction or planting of any New Zealand native plant to any Regionally Significant Wetland, is a **permitted** activity providing:

- (a) All reasonable measures are taken to minimise effects on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (b) The introduction or planting does not cause any flooding or erosion.

13.6.2.1 The introduction or planting of any plant to or on the bed of any lake or river for the purpose of remedying or mitigating the adverse effects of flooding, erosion, or non-point source discharge of contaminants, or to restore or enhance habitat, is a **permitted** activity providing:

- (a) Crack Willow *Salix fragilis* or Grey Willow *Salix cinerea* is not introduced to an area where it does not currently exist; and
- (b) The plant is not any pest plant listed in the Pest Management Strategy for Otago 2009; and
- (c) All reasonable steps are taken to minimise the release of sediment to the lake or river during the introduction or planting, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 100 metres downstream of the introduction or planting; and
- (d) The introduction or planting does not cause any flooding or erosion; and
- (e) The site is left tidy following the introduction or planting.

13.6.3 Discretionary activities: Resource consent required

13.6.3.1 Except as provided for by Rules 13.6.1.1 to 13.6.2.1, the introduction or planting of vegetation to the bed of any lake or river, or any Regionally Significant Wetland, is a *discretionary* activity.

Principal reasons for adopting

The introduction or planting of any plant, or any part of any plant (whether exotic or indigenous) on the bed of a lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

The distribution of those plants listed in Rule 13.6.1.1 is banned under the Biosecurity Act 1993 as they have been declared unwanted organisms. It is therefore appropriate to prohibit their introduction to the beds or the waters of Otago's lakes or rivers.

The introduction of vegetation under Rule 13.6.2.1 will have positive effects, including remedying or mitigating the adverse effects of flooding, erosion, or non-point source discharge of contaminants, and the restoration of habitat. This rule is adopted to enable such beneficial planting to occur. It excludes Crack and Grey willow, where they are not already present, due to their invasive nature. Any other activity involving the introduction of any plant to the bed of a lake or river is a discretionary activity in order that any adverse effects can be assessed.

13.7 The removal of vegetation

13.7.1 Permitted activities: No resource consent required

13.7.1.1 The physical removal of material of any of the following plants:

- (i) Lagarosiphon *Lagarosiphon major*; or
- (ii) Eel Grass *Vallisneria spiralis*; or
- (iii) Egeria *Egeria densa*; or
- (iv) Hornwort *Ceratophyllum demersum*; or
- (v) Hydrilla *Hydrilla verticillata*; or
- (vi) Sagittaria *Sagittaria graminea ssp platyphylla*; or
- (vii) Spartina *Spartina anglica*; or
- (viii) Salvinia *Salvinia molesta*; or
- (ix) Water Hyacinth *Eichhornia crassipes*; or
- (x) Water Lettuce *Pistia stratiotes*,

from the bed of any lake or river is a *permitted* activity, providing:

RULES: LAND USE ON LAKE OR RIVER BEDS OR REGIONALLY SIGNIFICANT WETLANDS

- (a) Except in the case of Lagarosiphon *Lagarosiphon major* in Lake Wanaka or Lake Dunstan, containment is utilised to ensure no weed fragments escape; and
- (b) In the case of Lagarosiphon *Lagarosiphon major* in Lake Wanaka, containment is utilised to ensure no floating mats or rafts of weed fragments are released onto the lake surface; and
- (c) The Otago Regional Council is notified of the location and nature of the removal, at least seven working days prior to commencing the removal; and
- (d) The site is left tidy following the removal.

13.7.1.2 The removal or clearance of plant material exotic to New Zealand from any Regionally Significant Wetland, is a **permitted** activity providing:

- (a) The plant is not Lagarosiphon (*Lagarosiphon major*) in Lake Wanaka or Lake Dunstan; and
- (b) All reasonable measures are taken to minimise effects on any Regionally Significant Wetland or on any regionally significant wetland value.

13.7.2 Controlled Activities: Resource consent required but always granted

13.7.2.1 Except as provided for by Rules 13.7.1.1 and 13.7.1.2, physical removal of material of any of the following plants:

- (i) Lagarosiphon *Lagarosiphon major*; or
- (ii) Eel Grass *Vallisneria spiralis*; or
- (iii) Egeria *Egeria densa*; or
- (iv) Hornwort *Ceratophyllum demersum*; or
- (v) Hydrilla *Hydrilla verticillata*; or
- (vi) Sagittaria *Sagittaria graminea ssp platyphylla*; or
- (vii) Spartina *Spartina anglica*; or
- (viii) Salvinia *Salvinia molesta*; or
- (ix) Water Hyacinth *Eichhornia crassipes*; or
- (x) Water Lettuce *Pistia stratiotes*,

from the bed of any lake or river, or from any Regionally Significant Wetland, is a **controlled** activity.

In granting any resource consent for the removal of material of the above identified plants in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) The method of removal; and

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- (b) The effects on any Regionally Significant Wetland or on any regionally significant wetland value; and
- (c) The duration of the resource consent; and
- (d) The information and monitoring requirements; and
- (e) Any bond; and
- (f) The review of conditions of the resource consent.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.7.3 Discretionary activities: Resource consent required

- 13.7.3.1 Unless covered by Rules 13.7.1.1 to 13.7.2.1, removal or clearance of plant material from any Regionally Significant Wetland, is a *discretionary* activity.

Principal reasons for adopting

No person may disturb, remove, damage or destroy any plant or any part of any plant (whether exotic or indigenous), or the habitats of any such plants or of animals, in, on, or under the bed of any lake or river in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless it is expressly allowed by a resource consent or is an existing lawful use (Resource Management Act Section 13(2)(b)).

The removal of material of the identified plants under Rule 13.7.2.1 will ensure that any spread of the plants caused by their removal is avoided. Any other removal of material of the identified plants from the bed of any lake or river is a controlled activity so that the Otago Regional Council has the opportunity to control the adverse effects likely to arise from that removal.

RULES: LAND USE ON LAKE OR RIVER BEDS OR
REGIONALLY SIGNIFICANT WETLANDS

14

Rules: Land Use other than in Lake or River Beds



14.1 Bore construction

Note: The construction of a bore is carried out for the purpose of taking groundwater, or which results in groundwater being taken. This is distinct from the activities of:

- The drilling of land carried out for any other purpose which is covered by rules under 14.2;
- The taking of groundwater, which is covered by rules under 12.2 in Chapter 12.

14.1.1 Controlled activities: Resource consent required but always granted

14.1.1.1 The excavation, drilling or other disturbance of land, other than in the bed of any lake or river, for the purpose of creating a bore, is a *controlled* activity.

In granting any resource consent for the excavation, drilling or other disturbance of land in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) The location of the bore including its relationship to other bores and other activities; and
- (b) The planned depth of the bore; and
- (c) The management of the bore head and maintenance of the bore; and
- (d) The nature of the bore; and
- (e) The method of drilling or excavation; and
- (f) The duration of the resource consent; and
- (g) The information and monitoring requirements; and
- (h) Any bond; and
- (i) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

Principal reasons for adopting

No person may use any land in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use (Resource Management Act Section 9(3)).

This rule is adopted to ensure that the Otago Regional Council has the opportunity to control the adverse environmental effects that may arise from penetration of an aquifer resulting from bore hole construction.

14.2 Drilling

14.2.1 Permitted activities: No resource consent required

14.2.1.1 The drilling of land, other than for the purpose of creating a bore, and other than on the bed of any lake or river, is a *permitted* activity providing:

- (a) The drilling does not occur on land over an aquifer identified in the C-series maps; and
- (b) The hole is filled or sealed on completion of the work so that contaminants are prevented from entering the hole at any level.

14.2.2 Controlled activities: Resource consent required but always granted

14.2.2.1 The drilling of land over an aquifer identified in the C-series maps, other than for the purpose of creating a bore and other than on the bed of any lake or river, is a *controlled* activity.

In granting any resource consent for the drilling of land in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) The potential for contamination of groundwater; and
- (b) The location of the drilling; and
- (c) The planned depth of the drilling; and
- (d) The management of the drill hole on completion; and
- (e) The method of drilling; and
- (f) The duration of the resource consent; and
- (g) The information and monitoring requirements; and
- (h) Any bond; and
- (i) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

14.2.3 Restricted discretionary activities: Resource consent required

14.2.3.1 Except as provided by Rules 14.2.1.1 and 14.2.2.1, the drilling of land, other than for the purpose of creating a bore and other than on the bed of any lake or river, is a *restricted discretionary* activity.

In considering any resource consent for the drilling of land in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) The potential for contamination of groundwater; and
- (b) The location of the drilling; and

- (c) The planned depth of the drilling; and
- (d) The management of the drill hole on completion; and
- (e) The method of drilling; and
- (f) The duration of the resource consent; and
- (g) The information and monitoring requirements; and
- (h) Any bond; and
- (i) The review of conditions of the resource consent.

Principal reasons for adopting

No person may use any land in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use (Resource Management Act Section 9(3)).

Rule 14.2.1.1 is adopted to enable drilling to occur, but in a manner that protects groundwater resources from the entry of contaminants. Rule 14.2.2.1 is adopted to ensure that the Otago Regional Council has the opportunity to control the adverse environmental effects that may arise whenever an identified aquifer is penetrated. Any other drilling is a restricted discretionary activity in order that any adverse effects on groundwater can be assessed.

14.3 The erection, placement, extension, alteration, replacement, reconstruction, demolition or removal of a defence against water other than on the bed of any lake or river

14.3.1 Permitted Activities: No resource consent required

14.3.1.1 The alteration or reconstruction of any defence against water, other than on the bed of any lake or river, is a *permitted* activity providing:

- (a) There is no permanent change to the scale, nature or function of the defence against water.

14.3.2 Discretionary Activities: Resource consent required

14.3.2.1 Except as provided for in Rule 14.3.1.1, the erection, placement, extension, alteration, replacement, reconstruction, demolition or removal, of any defence against water, other than on the bed of any lake or river, is a *discretionary* activity.

Principal reasons for adopting

No person may use any land in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use (Resource Management Act Section 9(3)).

The activities under Rule 14.3.1.1 will have no more than minor adverse effects on the environment. This rule is adopted to ensure that the Otago Regional Council has the opportunity to control defences against water so that they are constructed and maintained in a manner that does not exacerbate flood hazards or cause significant adverse effects on the environment.

14.4 Structures other than defences against water on the margins of lakes and rivers

14.4.1 Permitted Activities: No resource consent required

14.4.1.1 The erection or placement of any structure, other than a defence against water, within 7 metres of the margin of any lake, or within 7 metres of the top of the bank of any river, is a *permitted* activity, providing:

- (a) It does not result in the physical prevention or obstruction of access for works to avoid or mitigate any natural hazard; and
- (b) The Otago Regional Council is notified in writing, of the location and nature of the structure, at least seven working days prior to commencing the erection or placement.

14.4.2 Restricted discretionary activities: Resource consent required

14.4.2.1 Except as provided for by Rule 14.4.1.1, the erection or placement of any structure, other than a defence against water, within 7 metres of the margin of any lake, or within 7 metres of the top of the bank of any river, is a *restricted discretionary* activity.

In considering any resource consent for the erection or placement of a structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following matters:

- (a) The potential for physical access along the river or lake, for works to avoid or mitigate any natural hazard, to be prevented or obstructed, and the degree to which such access will be obstructed.

Principal reasons for adopting

No person may use any land in a manner that contravenes a rule in a regional plan or any proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use (Resource Management Act Section 9(3)).

Rule 14.4.1.1 is adopted to ensure that no person is restricted by a structure from having ready access along lakes or rivers, with machinery if necessary, in order to carry out works for the purpose of hazard avoidance or mitigation. Any other erection or placement of a structure, other than a defence against water, is a restricted discretionary activity, in order that any adverse effects on physical access for this purpose can be assessed.

14.5 Earthworks for residential development

Part G
Sediment from
earthworks for
residential
development

Note: 1. The rules in Section 14.5 do not apply to earthworks or soil disturbances covered by the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017.
2. Discharges resulting from earthworks are addressed only through rules in section 14.5.

14.5.1 Permitted activities: No resource consent required

Part G
Sediment from
earthworks for
residential
development

14.5.1.1 The use of land, and the associated discharge of sediment into water or onto or into land where it may enter water, for earthworks for residential development is a *permitted* activity providing:

- (a) The area of exposed earth is no more than 2,500 m² in any 12-month period per landholding; and
- (b) Earthworks do not occur within 10 metres of a water body, a drain, a water race, or the coastal marine area; and
- (c) Exposed earth is stabilised upon completion of the earthworks to minimise erosion and avoid slope failure; and
- (d) Earthworks do not occur on contaminated or potentially contaminated land; and
- (e) Soil or debris from earthworks is not placed where it can enter a water body, a drain, a race or the coastal marine area; and
- (f) Earthworks do not result in flooding, erosion, land instability, subsidence or property damage at or beyond the boundary of the property where the earthworks occur; and
- (g) The discharge of sediment does not result in any of the following effects in receiving waters, after reasonable mixing:
 - (i) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - (ii) any conspicuous change in the colour or visual clarity; or
 - (iii) any emission of objectionable odour; or
 - (iv) the rendering of fresh water unsuitable for consumption by farm animals; or
 - (v) any significant adverse effects on aquatic life.

14.5.2 Restricted discretionary activities: Resource consent required

Part G
Sediment from
earthworks for
residential
development

14.5.2.1 Except as provided by Rule 14.5.1.1, the use of land, and the associated discharge of sediment into water or onto or into land where it may enter water, for earthworks for residential development is a *restricted discretionary* activity.

In considering any resource consent under this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (a) Any erosion, land instability, sedimentation or property damage resulting from the activities; and
- (b) Effectiveness of the proposed erosion and sediment control measures in reducing discharges of sediment to water or to land where it may enter water; and
- (c) Compliance with the *Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005)*; and
- (d) Any adverse effect on water quality, including cumulative effects, and consideration of trends in the quality of the receiving water body; and
- (e) Any adverse effect on any natural or human use value, and on use of the coastal marine area for contact recreation and seafood gathering; and
- (f) Measures to avoid, remedy or mitigate adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses.

14.6 Rural land uses

14.6.1 Permitted activities: No resource consent required

Part D
Intensive
Grazing

14.6.1.1 The use of land for intensive grazing is a *permitted* activity providing:

- (a) The total cumulative area of the landholding used for intensive grazing is the lesser of:

 - (i) 100 hectares; or
 - (ii) 10% of the total cumulative area of the landholding.
- (b) There is no intensive grazing in any critical source area; and
- (c) Stock are progressively grazed (break-fed or block-fed) from the top of a slope to the bottom of a slope; and
- (d) A vegetated strip of at least 10 metres is maintained between the intensively grazed area and any water body, and all stock are excluded from this strip during intensive grazing.

14.6.2 Discretionary activities: Resource consent required

Part D
Intensive
Grazing

14.6.2.1 Except as provided by Rule 14.6.1.1, the use of land for intensive grazing is a *discretionary* activity.

14.7 Animal Waste Systems

14.7.1 Permitted activities: No resource consent required

Part B
Animal
waste
storage and
application

- 14.7.1.1 The use of land for the use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) that was constructed prior to 25 March 2020 is a *permitted* activity providing:
- (a) The storage pond is sized in accordance with the Dairy Effluent Storage Calculator; and
 - (b) The storage pond is either:
 - (i) Fully lined with an impermeable synthetic liner and has a leak detection system underlying the storage pond which is inspected not less than monthly, there is no evidence of any leakage, and a written record is kept recording the results of each inspection; or
 - (ii) Of impervious concrete construction; or
 - (iii) An above-ground tank; or
 - (iv) Certified by a Suitably Qualified Person within the last five years as:
 - (1) Structurally sound and without any visual defects; and
 - (2) Meeting the relevant pond drop test criteria in Schedule 18; and
 - (c) A management plan for the animal waste system is prepared and implemented that requires:
 - (i) Pond drop tests of the storage pond(s) every three years; and
 - (ii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water body, an artificial watercourse, or the coastal marine area, either directly or indirectly, in the event of power outage or the failure of equipment; and
 - (d) Upon written request by the Regional Council a written statement or certificate from a Suitably Qualified Person is provided to show compliance with Conditions (a) to (c).

Note: Rule 14.7.1.1 does not manage discharges of animal waste to land. Animal waste systems that comply with Rule 14.7.1.1 will require resource consent under Rule 12.C.2.5 for the discharge of animal waste to land.

Part B
Animal
waste
storage and
application

- 14.7.1.2 The use of land for the use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) that was constructed prior to 25 March 2020 and does not comply with

the conditions of Rule 14.7.1.1 is a *permitted* activity until the application date specified in Schedule 19.

14.7.2 Controlled activities: Resource consent required

Part B
Animal
waste
storage and
application

14.7.2.1 The use of land for the construction, use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) constructed after 25 March 2020 is a *controlled* activity provided the following conditions are met:

- (a) The storage pond is sized in accordance with the Dairy Effluent Storage Calculator; and
- (b) The storage pond is either:
 - (i) Fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond; or
 - (ii) Of concrete construction; or
 - (iii) Is an above-ground tank; and
- (c) The design of the animal waste system has been certified as being in accordance with IPENZ Practice Note 21¹ and IPENZ Practice Note 27;² and
- (d) The animal waste system is not located:
 - (i) Within 50 metres of any lake, river or regionally significant wetland; or
 - (ii) Within 90 metres of any water supply used for human consumption; or
 - (iii) Within 50 metres of any bore or soak hole; or
 - (iv) Within 50 metres of the property boundary; or
 - (v) Above subsurface drainage (other than a leak detection system); and
- (e) A management plan for the animal waste system is prepared and implemented that requires:
 - (i) For ponds that are fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond, inspections not less than monthly with a requirement to keep a written record of the results of each inspection; and
 - (ii) Pond drop tests of the storage pond(s) every three years; and
 - (iii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water body, an artificial watercourse, or the coastal marine area, either directly to water or onto or into land in

¹ Available from Otago Regional Council's website at <http://www.orc.govt.nz>

² Available from Otago Regional Council's website at <http://www.orc.govt.nz>

circumstances which may result in these contaminants entering water, in the event of power outage or the failure of equipment; and

- (iv) If a leak is detected by the leak detection system, an assessment is undertaken by a Suitably Qualified Person within two months of the detection to determine whether the leak is within the normal operating parameters of the pond.

In granting any resource consent under this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- (a) The design and construction of the system, including storage capacity, nature of the animal waste and the anticipated life of the system; and
- (b) The design, construction and adequacy of ancillary structures that are components of the animal waste system; and
- (c) The height of embankments and the placement and orientation relative to flood flows and stormwater run-off; and
- (d) Methods to protect the system from damage by animals and machinery; and
- (e) Quality of, and implementation of, a management plan for the animal waste system which requires pond drop tests of the system's storage pond(s) every three years; and
- (f) Potential adverse effects of construction, maintenance and use on water bodies, drains, groundwater, bores, drinking water supplies, the coastal marine area, stop banks, dwellings, places of assembly and urban areas; and
- (g) Location of the animal waste system; and
- (h) Measures to avoid, remedy or mitigate adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses.

14.7.3 Discretionary activities: Resource consent required

Part B
Animal
waste
storage and
application

14.7.3.1 The use of land for the construction, upgrade, use or maintenance of an animal waste system (including storage pond(s) and ancillary structures) is a *discretionary* activity provided it is not:

- (a) Permitted under Rules 14.7.1.1 or 14.7.1.2; or
- (b) Provided for by Rule 14.7.2.1.

15

Methods other than Rules



15.1 Introduction

This chapter of the Plan establishes the methods other than rules which will be used to achieve the Plan's objectives.

15.2 Liaison

15.2.1 Restrictions on taking water

15.2.1.1 The Otago Regional Council will liaise with relevant water supply authorities to ensure that, when takes of water by resource consent holders in a catchment are restricted, any consumption of water in a community supply taken from that catchment at the time of restriction is subject to hosing restrictions.

Principal reasons for adopting

This method is adopted to ensure that the disadvantages resulting from water shortages are shared by all those in the community using water.

15.2.2 Water allocation committees and water management groups

15.2.2.1 The Otago Regional Council will liaise with existing water allocation committees established under Policy 6.4.12 and water management groups established under Policy 6.4.12A, to establish and manage regimes for the rationing of the taking of surface water or groundwater.

Principal reasons for adopting

This method is adopted to ensure that those taking water, and who may be subject to minimum flow restrictions or aquifer restriction levels, are able to contribute effectively to the preparation of regimes for day-to-day rationing of water and the implementation of restrictions on the taking of water. Information about flows, levels and pressures will be provided to ensure such committees and groups will act in a timely and effective manner whenever restriction situations are imminent.

15.2.3 Liaison with water users

15.2.3.1 The Otago Regional Council will liaise with water users to assist with achieving the objectives and policies of the Plan.

15.2.3.2 The Otago Regional Council will help facilitate responses to local water needs, and collaborate with the community and others in scoping strategic options for development of new infrastructure.

Principal reasons for adopting

These methods are adopted to recognise the need for the Otago Regional Council to have an ongoing relationship with all people using the region's water bodies and to assist in obtaining optimum benefit from the use of Otago's water resources. Activities undertaken within water bodies can affect other lawful users and, through liaison, the concerns of all users of water bodies can be considered.

15.2.4 Coordination of approaches for the management of spills

15.2.4.1 In the event of any contaminant spill, the Otago Regional Council will work with other relevant agencies to clean-up, treat or remove the contaminant.

15.2.4.2 In the case of any event causing the accumulation of animal carcasses on the bed of any lake or river, and where ownership of the carcasses cannot be established, the Otago Regional Council will coordinate efforts for the clean-up or removal of the carcasses with the relevant city or district council or any other responsible party.

Principal reasons for adopting

These methods are adopted to ensure that there can be a quick and effective response to the accidental spill of contaminants and the accumulation of animal carcasses on the bed of any lake or river. There are several agencies who have an involvement in responding to these events. It is important that there is a coordinated response among the agencies to ensure that the spill or carcasses are quickly and effectively dealt with.

15.2.5 Promoting the treatment of stormwater

15.2.5.1 The Otago Regional Council will encourage operators of existing stormwater reticulation systems to utilise techniques that will assist to reduce the level of contaminants discharged from the systems.

Principal reasons for adopting

This method is adopted in order to maintain or enhance the quality of water in receiving environments, and thus the natural and human use values supported by water bodies. Techniques such as grassed swales, buffer strips, riparian vegetation and constructed wetlands can assist to trap sediment and remove nutrients present in existing stormwater discharges. The Otago Regional Council will encourage operators to use such techniques in existing stormwater reticulation systems, to reduce the level of contaminants present in the stormwater.

15.2.6 Recreational sanitary wastes and septic tank use

15.2.6.1 The Otago Regional Council will consult with city and district councils, and commercial recreation operators, to ensure the adequate provision of collection points for recreational sanitary wastes and human sewage from transport or recreational vehicles and vessels.

15.2.6.2 The Otago Regional Council will, through liaison with city and district councils, promote and encourage the development and use of improved septic tank technology, and other innovative or alternative technology for the on-site treatment and disposal of domestic effluent.

15.2.6.3 The Otago Regional Council will encourage city and district councils to install reticulated systems for sewage, where it is appropriate and

feasible, in any site where the conditions are such that on-site waste treatment could result in an adverse effect on the environment.

Principal reasons for adopting

These methods are adopted to prevent the uncontrolled discharge of human sewage to the environment from vehicles such as campervans, or from septic tank systems which are not performing adequately. It may be necessary to avoid on-site sewage discharges where there is concern about the susceptibility of the receiving environment to such discharges.

15.2.7 Advocacy to city and district councils about land use controls

15.2.7.1 The Otago Regional Council will seek the inclusion of appropriate provisions within district plans, and appropriate conditions on land use consents, that will assist to further the objectives and policies contained in this Plan.

Principal reasons for adopting

This method is adopted to promote integrated management of the adverse effects of land use on Otago’s lakes, rivers, aquifers and wetlands. It recognises that city and district councils have the opportunity to manage land uses that can result in such adverse effects, through rules and other methods in district plans. Such methods should ensure that land is used and developed in a manner that assists to maintain or enhance natural and human use values supported by water bodies.

15.2.8 Activities on beds or margins of lakes and rivers

15.2.8.1 The Otago Regional Council will liaise with city and district councils to ensure appropriate land use provisions are included within district plans concerning activities on the bed or margins of lakes or rivers.

15.2.8.2 The Otago Regional Council will liaise with, and where necessary hold joint hearings with, city and district councils concerning resource consent applications for activities on the bed or margins of lakes or rivers.

15.2.8.3 The Otago Regional Council will liaise with the Department of Conservation, Fish and Game Councils, Kai Tahu, Historic Places Trust, landholders and other interested parties to ensure that, where activities could disturb the bed of any wetland, lake or river, any adverse effect on aquatic habitat or heritage values is avoided, remedied or mitigated.

Principal reasons for adopting

Activities on the margins of lakes and rivers can have adverse effects on adjacent land in the bed of the lake or river and vice versa. Provisions should be included in district plans to recognise the potential for such “off-site” effects and ensure that they are appropriately managed. Where such provisions have already been included, both regional and district planning matters may apply in respect of the activity. The first two methods are adopted in recognition of the need for cooperation and consistency between the approaches of the different authorities in order to achieve the integrated management of any adverse effects.

The third method is adopted to encourage cooperative arrangements between the Otago Regional Council and other interested parties in the management of bed disturbance. Such arrangements will ensure that the Council is informed of, and can consider, the concerns of other parties with respect to particular activities or works.

15.2.9 Consultation with Kai Tahu

15.2.9.1 The Otago Regional Council will undertake and promote consultation with Kai Tahu ki Otago and take account of Iwi Management Plans in the management of Otago's water resources.

Principal reasons for adopting

The use of consultation to address Kai Tahu values is seen by Kai Tahu as being the most appropriate way to recognise and protect the cultural relationship Kai Tahu hold with Otago's water resources. Iwi management plans, particularly the *Kai Tahu ki Otago Natural Resource Management Plan*, form a basis for consultation with Kai Tahu. Other instruments made between the Otago Regional Council and Kai Tahu ki Otago provide a mechanism for consultation by the Council and water users, with Kai Tahu.

15.3 Information channels

15.3.1 Provision of information about effective water utilisation

15.3.1.1 The Otago Regional Council will encourage the efficient use of water by providing information to water users concerning:

- (a) Avoidance of wasteful practices; and
- (b) Opportunities for water storage during periods of high water availability; and
- (c) Opportunities for water conservation in general and particularly during periods of low flows or drought; and
- (d) Water resources available for taking.

Principal reasons for adopting

This method is adopted to enable water users to make decisions that result in the more efficient use of water than is currently the case. The information provided through this method will ensure better targeting of water use in irrigation or industrial practices and will result in less demand on the water resource when availability is low.

Furthermore, this method will ensure that individual water users and water management groups are provided with information on infrastructure options for taking, storing, transporting and distributing water, so that informed choices are made about effective water utilisation and management.

This method also ensures that the community and water users are informed, in a timely manner, of the potential for breaching minimum flows and aquifer restriction levels, and the likely onset of a water shortage direction. Water

management by either the Council or water management groups will be required until take suspensions and water shortage directions are removed.

15.3.2 Provision of information relating to the results of monitoring water bodies

15.3.2.1 Information gained by the Otago Regional Council from monitoring of water and water bodies will be made available as necessary and appropriate.

Principal reasons for adopting

This method is adopted to ensure that there is information available in an appropriate form to keep user groups and the community aware of conditions and trends within Otago's water resources and water bodies. This will assist water users in making management decisions about their use of water. Monitoring information will be provided through methods as outlined in section 19.3 of this Plan. This information provision will:

- (a) Allow the community to discuss the implications of the information obtained;
- (b) Assist in the identification of new issues;
- (c) Provide an opportunity for feedback on proposals to address issues; and
- (d) Enable holders of resource consents to be informed of river flows and aquifer levels and pressures, particularly when these are approaching the point at which takes may be restricted.

15.3.3 Provision of information relating to flood risk

15.3.3.1 The Otago Regional Council will provide advice about the likely susceptibility of the location of any proposed structure to flooding, either when a resource consent applicant, or other individual, requests the information, or when a city or district council requires the information in preparing district plans.

15.3.3.2 The Otago Regional Council will provide information to each city and district council concerning the location, extent and likely characteristics of floodplains, floodways, and ponding areas in its district.

Principal reasons for adopting

These methods reflect the role that regional councils have played in investigating the effects of floods and providing their findings to authorities involved in land use planning. The first method is adopted because it is important to provide information that is available, upon request, in order to enable people and communities to pursue activities in beds and margins of wetlands, lakes or rivers with safety. Similarly, the second method is adopted because it is essential that city and district councils are informed of the likely costs of allowing certain types of land use development in places prone to inundation. The city or district council may then prepare a hazard register based on this information and inform developers.

15.3.4 Provision of information relating to clean-up of accidental spills

- 15.3.4.1 In the event of any contaminant spill, the Otago Regional Council will provide advice to the spiller, where known, relating to options for the disposal or treatment of the contaminant.

Principal reasons for adopting

This method is adopted to ensure that there is appropriate post-spill management in response to spill events that are likely to lead to water contamination.

15.4 Promotion and education

15.4.1 The maintenance or enhancement of public access

- 15.4.1.1 The Otago Regional Council will assist in providing or improving public access to and along Otago's water bodies and will encourage city and district councils, the Department of Conservation and landholders to provide or improve public access to and along Otago's water bodies, where appropriate.

Principal reasons for adopting

Public access to and along a water body may be restricted due to the fact that there are no formal provisions for legal public access. This method is adopted to enhance public access in such situations by encouraging city or district councils to provide or improve alternative access through provision of public roading or establishment of esplanade reserves, esplanade strips, or access strips. Encouragement will also be given to the Department of Conservation to provide marginal strips along water bodies and Walkways to them, to achieve formal access. Informal public access arrangements can, in addition, be promoted among landholders. Although less secure, such arrangements can assist in maintaining or enhancing public access to and along lakes and rivers.

15.4.2 Advocacy and promotion to landholders and industry groups

- 15.4.2.1 The Otago Regional Council will use promotion and education to encourage land management which:
- (a) Does not adversely affect the flow of water in times of low flow;
 - (b) Minimises the amount of nutrients, sediment or other contaminants present in runoff;
 - (c) Benefits the natural character, or the amenity and habitat values, of wetlands, lakes or rivers and their margins;

- (d) Ensures the retention of appropriate existing riparian vegetation, and allow appropriate revegetation;
- (e) Does not restrict public access to or along the margins of water bodies;
- (f) Introduces innovative clean technologies or waste minimisation methodologies; and
- (g) Assists the retention or protection of any heritage value associated with any wetland, lake or river.

15.4.2.2 The Otago Regional Council will provide information to landholders, industry groups and the general public about mechanisms and techniques to maintain or enhance water quality, such as:

- (a) Minimising land disturbance;
- (b) Maintaining or enhancing appropriate riparian vegetation and buffer strips;
- (c) Nutrient budgeting;
- (d) Avoiding the inappropriate use of stormwater systems;
- (e) Development and implementation of contingency plans for the accidental spill of contaminants;
- (f) Avoiding stock access to water bodies; and
- (g) Upgrading existing groundwater bores to prevent entry of contaminants.

Principal reasons for adopting

These methods are adopted to ensure resource users and the wider community are aware of actions that can be taken to reduce the adverse effects of activities on Otago’s water resources. By educating landholders and industry groups of the effect of their activities, the Council can encourage appropriate changes to the behaviour of these individuals or groups.

15.4.3 *[Repealed – 1 October 2013]*

15.5 Codes of practice and environmental management systems

15.5.1 Development and implementation of codes of practice and environmental management systems

15.5.1.1 The Otago Regional Council encourages and supports the development and use of codes of practice and environmental management systems that reduce adverse effects on water resources.

15.5.1.2 *[Repealed – 1 May 2014]*

Principal reasons for adopting

Codes of practice and environmental management systems set guidelines or standards, and practical mechanisms to influence the use and development of land and the effects of activities on water. Although generally voluntary, codes of practice and environmental management systems are recognised as one of the options that are at the Otago Regional Council's disposal, to achieve desirable outcomes for water bodies. An environmental management system may be developed which is applicable to the specific needs of a single business, while a code of practice may be developed for use throughout an industry.

The first method is adopted to encourage the development of codes of practice and environmental management systems.

15.6 Remedial works**15.6.1 Remedying physical degradation**

15.6.1.1 The Otago Regional Council will identify and seek to enhance those parts of wetlands, lakes and rivers which have been physically degraded by land use activities.

Principal reasons for adopting

This method is adopted to ensure that there is recognition of those parts of wetlands, lakes and rivers and their margins where degradation has occurred as a result of land use activities. Identification of degraded areas will enable appropriate remedial work to be undertaken. Degradation can result in a loss of habitat, natural character and amenity values supported by a water body. The "Enhancing Otago's Rivers" programme has been undertaken to identify areas where degradation has occurred. The details of the work that might be undertaken each year will be open to public submissions as part of the Otago Regional Council's Annual Plan process.

15.7 Deemed permits**15.7.1 Methods and strategies for deemed permits**

15.7.1.1 The Otago Regional Council will, with the water users, investigate and develop methods and strategies for the orderly transition of deemed permits to resource consents, given that the deemed permits will expire on 1 October 2021.

Principal reasons for adopting

The Resource Management Act provides that deemed permits will expire in 2021. Deemed permits have become a significant element of Otago's water management regime and confer significant benefits upon the region's people and communities.

The exercise of deemed permits can constrain opportunities to implement minimum flows established by this Plan to maintain the life-supporting capacity for aquatic ecosystems and natural character of rivers.

The Regional Council will assist deemed permit holders with the development of an appropriate management regime to replace deemed permits when they expire. The Council, in partnership with the affected community, will assist with appropriate investigations and monitoring of the effects of deemed permits.

This method is also adopted to implement Policy 6.6.3 to work with and seek co-operation of deemed permit holders in achieving observance of minimum flows, matching takes with needs and measuring takes and return flows.

It is therefore necessary to initiate an orderly transition from deemed permits to resource consents under the Resource Management Act.

15.8 Methods for calculating allocation and applying minimum flows

15.8.1 Methodology for calculating consented 7-day take and assessed actual take

15.8.1.1 The Otago Regional Council will use the following process when calculating the consented 7-day take of any catchment area for the purposes of Policy 6.4.2(b):

- (a) Establish the weekly rate of surface water take authorised by all consents existing in the catchment at 28 February 1998 (or 19 February 2005 in the Welcome Creek catchment, or 7 July 2000 in the Waianakarua catchment); and
- (aa) Establish the weekly rate of connected groundwater takes authorised by all consents existing at 10 April 2010; and
- (b) Where a consent does not specify a weekly rate the monthly, daily or instantaneous rate will be converted into a weekly rate; and
- (c) Eliminate takes that immediately return all of that water to the river, and takes that are solely a re-take of irrigation runoff water; and
- (d) Eliminate takes that have a minimum flow higher than that set by Schedule 2A.

In calculating a catchment's assessed actual take for the purposes of Policy 6.4.9(a), steps (a) to (d) above are followed by:

- (e) Eliminate takes that cannot be exercised, whether due to legal or physical constraints, when flows in the catchment main stem are at the natural 7-day mean annual low flow; and
- (f) Establish at what flow the takes identified in (e) above will be exercised, and reinstate if the new allocation may interfere; and
- (g) Consider eliminating mining privilege takes which are not currently being exercised.

Principal reasons for adopting

This method is adopted to assist in determining the allocation status of catchments in order to establish whether further primary allocation is available,

in accordance with Policy 6.4.2, and to assist in calculating the minimum flow set in accordance with Policy 6.4.9(a).

15.8.1A Methodology for determining supplementary allocation

15.8.1A.1 Except where specified in Schedule 2B, the Otago Regional Council will assign supplementary allocation blocks for any catchment area for the purposes of Policy 6.4.9(a) using the following table:

7 day mean annual low flow of catchment (litres per second)	Supplementary allocation block (litres per second)
< 10	50
10 – 299	100
300 – 999	250
> 1000	500

The size of the first and any subsequent supplementary allocation blocks are based on the 7-day mean annual low flow of the catchment, and ensure flow variability is maintained.

15.8.1A.2 The Otago Regional Council will use the following process when calculating the supplementary minimum flow for supplementary allocation block(s) for any catchment area, where assessed actual take is unable to be calculated for the purposes of Policy 6.4.9(a):

- (a) Establish the primary allocation under Policy 6.4.2;
- (b) Add a volume equivalent to the first supplementary allocation block for that catchment assigned under Method 15.8.1A.1;
- (c) For each subsequent supplementary allocation block, add the volume equivalent to that supplementary allocation block for that catchment, assigned under Method 15.8.1A.1.

The formula for calculating the supplementary minimum flows is therefore as follows:

$$\text{Supplementary minimum flow} = \text{Primary allocation} + \text{Supplementary allocation}(s)$$

Principal reasons for adopting

These methods are adopted to provide certainty and consistency in the determination of the size of supplementary allocation blocks, which in turn determines the associated supplementary minimum flow.

15.8.2 Methodology for tracking minimum flows

15.8.2.1 The Otago Regional Council will use the existing flow recorder sites listed in Schedule 2 to track Schedule 2 river flows in order to

suspend taking, when Schedule 2 minimum flows have been reached, in accordance with Policy 6.4.11.

15.8.2.2 Outside Schedule 2 areas, where no flow recorder site is currently available and where there are takes present that require flow monitoring, one or more of the following techniques may be used to track river flows:

- (a) Installing a continuous flow recorder station;
- (b) Installing a fully rated staff gauge site, manually read at times of low flow on an as-required basis;
- (c) Utilising a continuous flow recorder station on another river as an indicator of flows in the source river; or
- (d) Using one-off flow gaugings, undertaken on an as-required basis.

River flows are to be measured at the catchment’s discharge point, or as close as practicable upstream of that point having regard to any physical constraints.

Principal reasons for adopting

These methods are adopted to indicate the various possible means for tracking river flows, in order to implement policies under section 6.4 of this Plan. The measuring of flows becomes particularly critical when the minimum flows set in the Plan are approached.

15.8.3 Methodology for calculating assessed maximum annual take for groundwater

15.8.3.1 The assessed maximum annual take of groundwater from any aquifer for the purposes of Policy 6.4.10A1(a), will be the sum of:

- (a) The annual volume specified on consents to take groundwater from that aquifer; and
- (b) Where a consent does not specify an annual volume, it is calculated using the instantaneous, daily, weekly or monthly limits specified as shown below:
 - (i) Where the purpose of use includes irrigation, convert the consent limit as follows:
 - (1) Where a daily or a monthly limit is specified:

Consent Limit	Purpose of use irrigation
Daily	Multiply by 90
Monthly	Multiply by 6

Note: A 90 day limit is equivalent to irrigating 150 days at 60% of the maximum take rate. A 6 month

limit is representative of an annual irrigation season.

Where both limits are specified, use the limit which yields the smaller volume.

(2) Where no daily or monthly limit is specified:

Consent Limit	Purpose of use irrigation
Instantaneous (e.g. litres/second or m ³ /hour)	Convert to a daily volume assuming taking of 12 hours per day, and then multiply by 90.
Weekly	Convert to a monthly volume, by multiplying by 4.3, and then multiplying by 6.

Where both limits are specified, use the limit which yields the smaller volume.

(3) If a consent specifically restricts taking over different periods, use the quantity and time limits specified on the consent.

(ii) Where the only purpose of use is frost-fighting, convert any consent limit to a 20 day volume.

(iii) Except as provided for by (i) and (ii), convert the consent limit to a 12-month volume.

(c) less any quantity specified in a consent as non-consumptive.

The assessed maximum annual take sums only those consents allocated as groundwater under Policy 6.4.1A(c) and (d).

Principal reasons for adopting

This method is adopted to assess the annual volume of take from an aquifer, and so assist in determining the remaining allocation available from an aquifer.

15.9 Gathering of information

15.9.1 Resource investigations

15.9.1.1 The Otago Regional Council, together with water users, relevant agencies and the affected community, will gather information that supports future management decisions on Otago's water resources.

15.9.1.2 The Otago Regional Council will encourage and undertake research as is necessary to improve knowledge about the natural and human use values of Otago's water resources.

- 15.9.1.3 The Otago Regional Council, together with water users, relevant agencies and the affected community, will:
- (a) Establish a priority order for investigations into the effects of deemed permits (mining privileges) and resource consents for taking surface water on Otago's water bodies and their habitat values, within two years of this Plan becoming operative; and
 - (b) Identify water bodies with significant native fish values within five years of this Plan becoming operative; and
 - (c) Commence investigations into the effects of deemed permits (mining privileges) and resource consents for the taking of surface water on Otago's water bodies and their habitat values, within five years of this Plan becoming operative.
- 15.9.1.4 The Otago Regional Council will use the information available from Methods 15.9.1.1 to 15.9.1.3 to establish minimum flows for catchments not in Schedule 2, to be added to Schedule 2A by way of plan change.

Principal reasons for adopting

These methods are adopted to assist with:

- Making decisions on resource consent applications;
- Monitoring and review of the Plan's provisions;
- Providing for the transition from deemed permits (mining privileges) to water permits; and
- Establishing minimum flows in catchments not identified in Schedule 2A.

For many Otago water bodies, detailed information that can assist with making informed management decisions is limited. The Otago Regional Council will determine appropriate information requirements in consultation with the community and will gather such information.

The Council will establish a priority order for investigating catchments affected by water takes. These investigations will study the effects of deemed permits and other resource consents for the taking of surface water and will include an assessment of effects on native fish values. For catchments not in Schedule 2, investigations will be followed by a plan change to set a minimum flow, where environmental benefit will result. Where environmental benefit will result from applying minimum flows to only resource consents other than mining privileges in the catchment, a plan change may also occur.

The Otago Regional Council will identify water bodies with significant native fish values using the results of the research programme currently being carried out by the Department of Conservation to find water bodies which host native fish species (due for completion by the end of June 2005) and the Council's own studies.

The Council will consider all information from the suite of methods in 15.9.1, including information on economic and social effects, when making decisions concerning the future management of Otago's water resources.

The steps to be taken by the Council each year to implement these methods will be subject to the Council's Annual Plan process.

15.10 Plan Implementation

15.10.1 Schedule 15

15.10.1.1 From the date specified in Schedule 15, where water quality fails to meet the Schedule 15 limits and targets, the Council:

- (a) Will investigate the cause; and
- (b) May take action to address any unauthorised discharge; and
- (c) May review the Schedule 15 limits and targets and alternative permitted discharge rules, including Schedule 16 thresholds.

15.10.2 Groundwater

15.10.2.1 The regional council will maintain (through its Annual Plan and Long Term Plan) a groundwater programme that:

- (a) Investigates water quality in the aquifers in the Otago region;
- (b) Reviews and sets nitrogen leaching rates; and
- (c) Makes changes to the plan under the RMA to introduce revised and/or additional nitrogen controls.

In developing and implementing the groundwater programme the regional council will engage with stakeholders over the scope, methodology (including socio-economic analysis) and sequencing of the investigation process prior to any statutory process. The review of leaching rates will be prioritised in areas that will be identified as high risk for farmer non-compliance and/or risk of not achieving environmental objectives and any revised leaching rates included in this plan prior to 2020.

METHODS OTHER THAN RULES

16

Information Requirements



16.1 Introduction

The Resource Management Act requires that applications for a resource consent be made in accordance with Section 88. The Resource Management Act further requires that, where an assessment of the effects of the proposed activity is required, this assessment be prepared in accordance with the Fourth Schedule of the Act.

In general, applications for resource consent for activities affecting Otago's water resources or water bodies will be required to demonstrate that:

- (a) The effects of the proposed activity comply with the relevant objectives, policies and rules of this Plan;
- (b) Information has been included, in accordance with the Fourth Schedule of the Resource Management Act, to enable the consent authority to make an assessment of the effects of the proposed activity; and
- (c) Where practicable, consultation has occurred with parties likely to be affected by the proposed activity.

Without limiting the requirements of Section 88 of the Resource Management Act, or of the Fourth Schedule to the Act, any application for any activity which this Regional Plan: Water specifies as being:

- (a) Controlled;
- (b) Restricted discretionary; or
- (c) Discretionary;

will be required to include information, as specified in this chapter.

Applications will also be assessed in terms of policies in the Regional Policy Statement for Otago. There may be additional information requirements once regard has been had to the Regional Policy Statement.

Pursuant to Section 88(2) of the Resource Management Act, no application shall be made for an activity that this Plan specifies as a prohibited activity once the time for making or lodging submissions or appeals against the proposed rule has expired and:

- (a) No such appeals or submissions have been lodged; or
- (b) All such submissions or appeals have been withdrawn or dismissed.

Applications for resource consents shall be made on the prescribed forms available from the Otago Regional Council. The detail of the environmental impact assessment should be in context with the scale of the proposed activity.

16.2 General information required

The following information must be supplied with all resource consent applications:

1. The name and address of the applicant.
2. A description of the activity, its nature, purpose and duration.

3. The location of the activity together with a site plan, legal description, and relevant map references.
4. A description of possible alternative locations or methods and the reasons for making the proposed choice.
5. The scale of the activity, including the size of the area required for the activity, in hectares or square metres.
6. An assessment of any actual or potential effects of the activity on the environment.
7. A description of the measures to be undertaken to avoid, remedy or mitigate any effect on the environment, and the extent to which environmental compensation, if any, has already been provided with respect to the activity.
8. A list of names and addresses of landholders likely to be directly affected by the activity.
9. An identification of those persons interested in or affected by the activity, any consultation undertaken, and any response to the views of those consulted. Depending on the type of activity proposed, or its scale or location, these people may include:
 - (a) Neighbouring landholders,
 - (b) Local runanga and te Runanga o Ngai Tahu,
 - (c) Department of Conservation,
 - (d) City or district councils,
 - (e) Fish and game councils,
 - (f) The New Zealand Historic Places Trust,
 - (g) Commercial user groups,
 - (h) Recreational user groups, or
 - (i) The community in general.
10. A statement of whether any other resource consent is required from any other consent authority to undertake the activity and whether any such consent has been applied for, or obtained.

16.3 Specific information requirements

In addition to the general information required by Section 16.2 above, where the proposed activity involves the following activities, the information listed will be required.

16.3.1 The taking of surface water or groundwater

1. A description of the rate, volume, timing and frequency (including the 7-day take and annual or seasonal volumes) of the proposed take and an assessment of the need for the take.
2. A statement of the intended purpose of use for which the water is to be taken and the location where the water is to be used.
3. A description of the methods of take, delivery, storage (if any) and application to be used.
4. An assessment of the effect of the take on other users of the source water body.

- 4A. An overview of the economic, social, environmental and cultural effects of taking from the water source applied for, over other practicable sources, to an extent relative to the scale of the application.
- 4B. A statement about how, or if, the applicant proposes to work with other water users to meet day-to-day water requirements; and whether there is a water supply scheme in the area.
- 4C. Evidence of the rate, volume, timing and frequency of water taken under any existing consent, over the preceding 5 years.
- 4D. An outline of the value of the investment of the existing consent holder.
- 5. In the case of the taking of groundwater, a description of the bore used or to be used.
 - 5A. In the case of the taking of groundwater, affected parties who are those taking from that aquifer, within a radius r of the proposed pumping bore as specified in Schedule 5B.
 - 5B. In the case of the taking of groundwater, results of the aquifer test.
- 6. In the case of the taking of groundwater, a description of the likely adverse effect on the aquifer or any connected surface water body using the equations given in Schedule 5A of this Plan.
- 7. In the case of the taking of groundwater for irrigation purposes, a description of the quality of the groundwater where there is likely to be any adverse effect on soils.
- 8. In the case of any resource consent application for the taking of water under Rule 12.1.5.1 or 12.2.4.1, an assessment of the effects of the activity on:
 - (a) The natural and human use values including those identified in Schedule 1 for any affected water body; and
 - (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body.

Note: Where the Council already holds this information under the requirements of an existing consent, the applicant may provide a cross-reference to the consent number in relation to which this information is held.

16.3.2 The damming or diversion of water

- 1. An assessment of the effects of the activity on:
 - (a) The natural and human use values set out in Schedule 1 for any affected water body; and
 - (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body; and
 - (d) Other users of any water or water body affected by the activity; and
 - (e) The movement of water and sediment; and

- (f) Any defence against water; and
 - (g) Adjacent land.
2. An assessment of the effect on upstream and downstream users of any affected water bodies, land or water, including any likely effect should a dam fail or be overtopped either during or after construction.
 3. A description of the anticipated effect of the activity on public access to or along the water body including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
 4. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.
 5. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.
 6. A description of the provisions made for the remediation of any adverse effect of the failure or overtopping of the dam.
 7. In the case of a dam, the intended timing and duration of the filling of any reservoir and the proposed discharges from the dam.
 8. A description of the flow regime intended to be maintained in the water body downstream of the dam or diversion.
 9. In the case of a diversion, the total quantity or proportion of the flow that is intended to be diverted.
 10. An assessment of any known contaminated land, for example a recognised “contaminated site”, that may be flooded or inundated by the damming or diversion.
 11. In the case of a flood detention dam, a description of the mechanism for releasing water.

16.3.3 *[Repealed – 1 May 2014]*

16.3.4 The use of a structure on the bed of a lake, river, or Regionally Significant Wetland

1. A description of the current legal status of the structure including compliance with any district rule or proposed district rule.
2. A description of the nature of the use and the effect this may have on the function or structural integrity of the structure.
3. A description of work to be undertaken to maintain the structure in good repair.

16.3.5 The erection, placement, extension, alteration, replacement, or reconstruction of a structure on the bed of a lake, river, or Regionally Significant Wetland

1. A description of the structure's dimensions, whether existing or proposed, including an assessment of any percentage change in size of the structure.
2. The expected construction period
3. A description of the proposed method of construction including:
 - (a) The material to be used to erect or place, or extend, alter, or reconstruct the structure;
 - (b) The equipment to be used; and
 - (c) A construction plan.
4. An assessment of the effects of the activity on:
 - (a) The natural and human use values set out in Schedule 1 for any affected water body; and
 - (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body; and
 - (d) The movement of water and sediment; and
 - (e) Any defence against water.
5. A description of the anticipated effect of the activity on public access to or along the water body including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
6. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.
7. An assessment of the likely effect of any flow or sediment process operating in the area, on the structure.
8. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.
9. A description of work to be undertaken to maintain the structure in good repair.
10. In the case of the erection or placement of a structure, a description of the provisions to be made for the maintenance of fish passage.
11. In the case of extension, alteration, or reconstruction, a description of the current legal status of the structure including compliance with any district rule or proposed district rule.

16.3.6 The demolition or removal of a structure on the bed of a lake, river, or Regionally Significant Wetland

1. A description of the structure to be removed including a description of its former purpose and use.
2. A description of any amenity or historic value attached to the structure to be removed.
3. An assessment of the effects of the activity on:
 - (a) The natural and human use values set out in Schedule 1 for any affected water body; and
 - (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body; and
 - (d) The movement of water and sediment; and
 - (e) Any defence against water.
4. A description of the anticipated effect of the activity on public access to or along the water body including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
5. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.
6. Evidence that the existing authorised owner of the structure, if known, has given their approval to the demolition and removal.
7. A description of the extent to which all or part of the structure is to be demolished or removed.
8. A description of the methods to be used to remove the structure and the anticipated disturbance of the bed or margin resulting from that removal, and a description of the methods to be used to rectify the disturbance or rehabilitate the site.
9. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.

16.3.7 The alteration of the bed of a lake, river, or Regionally Significant Wetland

1. A description of the nature, scale and frequency of the proposed bed alteration.
2. A description of the proposed method of the alteration, including a description of equipment to be used.
3. An assessment of the effects of the activity on:
 - (a) The natural and human use values set out in Schedule 1 for any affected water body; and

- (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body; and
 - (d) Other users of any water or water body affected by the activity; and
 - (e) The movement of water and sediment; and
 - (f) Any defence against water; and
 - (g) Adjacent land.
4. A description of the anticipated effect of the activity on public access to or along the water body including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
 5. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.
 6. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.
 7. In the case of the extraction of alluvium:
 - (a) An assessment of the volume of material proposed to be removed, in terms of a total annual volume, and in terms of daily amounts (where applicable); and
 - (b) A description of the period over which the extraction will occur, and the frequency of removal in any 12 month period; and
 - (c) A description of the methods to be used to remove the material; and
 - (d) An assessment of alternatives, including alternative sources of material, that have been considered to the proposed extraction and the reasons why the extraction is required in the location chosen.
 8. In the case of reclamation or deposition of a substance onto or into the bed of a lake or river, a description of the composition of the material proposed to be deposited.

16.3.8 The introduction or planting of vegetation to or on the bed of a lake, river, or Regionally Significant Wetland

1. The name of the plant or plants proposed to be introduced and the proposed methods to be used to introduce the plant.
2. The purpose for introducing the plant or plants.
3. A description of whether the plant or plants are already resident in the area of the proposed introduction.
4. An assessment of the effects of the activity on:
 - (a) The natural and human use values set out in Schedule 1 for any affected water body; and

- (b) The natural character of any affected water body; and
 - (c) The amenity values supported by any affected water body; and
 - (d) Other users of any water or water body affected by the activity; and
 - (e) The movement of water and sediment; and
 - (f) Any defence against water; and
 - (g) Adjacent land.
5. A description of the anticipated effect of the activity on public access to or along the water body including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
 6. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.
 7. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.

16.3.9 The removal of vegetation from the bed of a lake, river or Regionally Significant Wetland

1. The method of removal.

16.3.10 The construction of a groundwater bore or the drilling of land

1. A description of the nature and scale of the bore construction or drilling, including its proposed depth.
2. A statement of the purpose of the proposed bore construction or drilling activity.
3. A description of the nature of the land where the bore construction or drilling is to occur, its soils, geology, and its proximity to water including groundwater.
4. A description of the bore head or drill hole management, or other methods, to be used to prevent contamination of groundwater, or to prevent groundwater running to waste.
5. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.

16.3.11 *[Repealed – 1 October 2013]*

16.3.12 *[Repealed – 1 October 2013]*

16.3.13 The erection, placement, extension, alteration, replacement, reconstruction, demolition or removal of a defence against water

1. A description of the defence against water's dimensions, whether existing or proposed, including an assessment of any percentage change in size of the defence against water.
2. The expected construction period.
3. A description of the proposed method of construction including:
 - (a) The material to be used to erect, or place, or extend, or alter, or replace, or reconstruct, the defence against water; and
 - (b) The equipment to be used; and
 - (c) A construction plan.
4. An assessment of the effects of the activity on:
 - (a) Any waahi tapu, waahi taoka, or other site of significance to Kai Tahu including values in Schedule 1; and
 - (b) Any affected water body including values in Schedule 1; and
 - (c) The natural character of any affected lake, river or its margins, including values in Schedule 1, and any wetland; and
 - (d) Any heritage value including values in Schedule 1; and
 - (e) Any amenity value; and
 - (f) The movement of water and sediment; and
 - (g) Any defence against water.
5. A description of the anticipated effect of the activity on public access including a description of:
 - (a) The extent to which members of the public would be excluded or restricted from the area; and
 - (b) Where existing public access would be excluded or restricted as a result of the activity, a description of the methods, if any, proposed to bring about enhanced access in the area or elsewhere.
6. An assessment of the effect of the activity on any natural hazard including flooding, and the extent to which it is likely to create or exacerbate a natural hazard.
7. An assessment of the likely effect of any flow or sediment process operating in the area, on the defence against water.
8. A description of work to be undertaken to maintain the defence against water in good repair.
9. A description of the intended purpose and action of the defence against water in flood circumstances.
10. In the case of extension, alteration, replacement, or reconstruction, a description of the current legal status of the defence against water including compliance with any district rule or proposed district rule.

11. In the case of demolition or removal, evidence that the existing authorised owner of the defence against water, if known, has given their approval to the demolition.
12. In the case of demolition or removal, a description of the extent to which all or part of the defence against water is to be demolished or removed.
13. In the case of demolition or removal, a description of the methods to be used to remove the defence against water and the anticipated disturbance of the bed or margin of any water body resulting from that removal, and a description of the methods to be used to rectify the disturbance or rehabilitate the site.

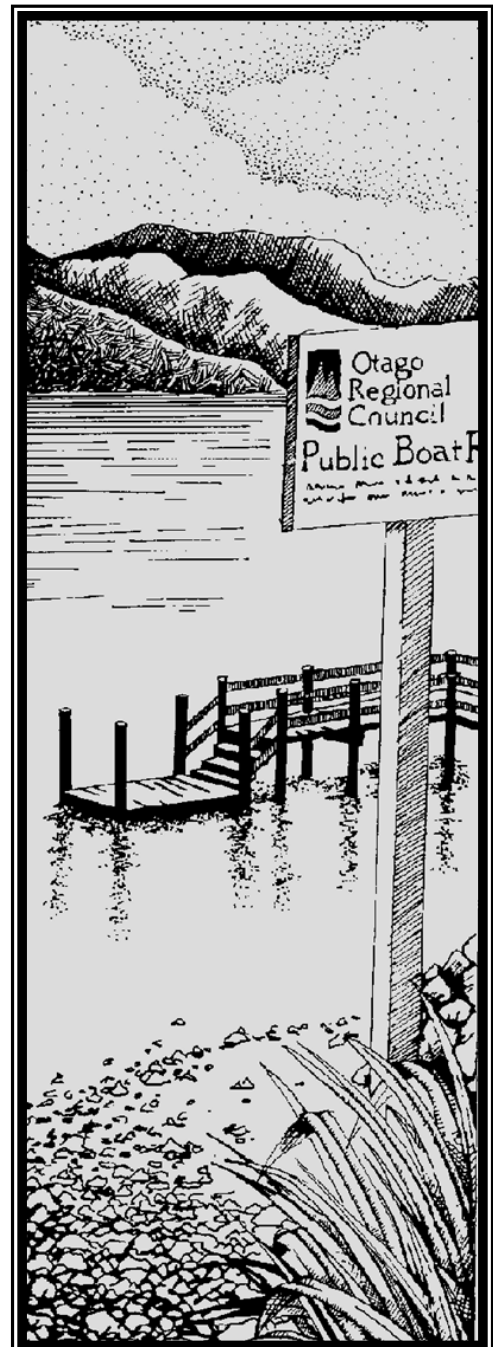
16.4 Provision of further information

Pursuant to Section 92 of the Resource Management Act, the Otago Regional Council may at any reasonable time before the hearing of a resource consent application, by written notice to an applicant, require further information. The variable nature and site specific aspects of activities within Otago's water bodies make it difficult to define all of the required information without closer investigation of each application. Accordingly, the applicant may be required to supply further information where it is necessary to enable the Otago Regional Council to better understand the nature of the proposed activity, the effect it will have on the environment, or how the adverse effects may be avoided, remedied or mitigated.

INFORMATION REQUIREMENTS

17

Financial Contributions



17.1 Introduction

Where the Otago Regional Council grants a resource consent under the rules in this Plan for diversions, reclamations or dams, and for activities that adversely affect Regionally Significant Wetlands or regionally significant wetland values, it may impose a condition requiring that a financial contribution be made for the purposes specified in this chapter of the Plan.

The term “financial contribution” is defined in Section 108(9) of the Resource Management Act as a contribution of:

- (a) *Money; or*
- (b) *Land, including an esplanade reserve or esplanade strip (other than in relation to a subdivision consent), but excluding Maori land within the meaning of the Maori Land Act 1993 unless that Act provides otherwise; or*
- (c) *A combination of money and land.*

Policies 6.5.6, 8.4.2 and 10.4.2A of the Plan outline the activities for which a financial contribution, or for which works or services, may be required.

Policies 6.5.6 and 8.4.2 require financial contributions, or works or services, for activities involving the diversion of water, reclamation or damming, to offset, remedy or mitigate unavoidable adverse effects on:

- (a) Any natural or human use value identified in Schedule 1;
- (b) The natural character of the water body;
- (c) Any amenity value supported by the water body; or
- (d) Any heritage value associated with any affected water body.

Policy 10.4.2A allows financial contributions to offset the adverse effects of activities on Regionally Significant Wetlands or regionally significant wetland values where the avoidance, remediation or mitigation of adverse effects is not adequate.

Works and services apply to remediation or mitigation activities, while financial contributions may apply to the offsetting of adverse effects that cannot be fully avoided or completely remedied or, in the Council’s opinion, adequately mitigated.

Financial contributions may be for various purposes including ensuring positive effects on the environment to offset any adverse effects. The provisions which follow are intended to reflect the requirements of Section 108(9) of the Resource Management Act and Clause 5 of Part 1 of the Second Schedule of the Act, and set out:

1. The circumstances when such contributions may be imposed;
2. The purposes for which such contributions may be required and used;
3. The manner in which the level of the contribution will be determined.

In addition to these matters, the chapter also specifies the assessment criteria to which the Council will have regard when deciding whether to impose a financial contribution, the type and amount of any such contribution, and the general provisions that would apply.

In deciding on any financial contribution, the Otago Regional Council will take into account that requiring a contribution may not be appropriate in every case, even where there are adverse effects. Every resource consent application needs to be considered on a case by case basis as to the nature and extent of any contribution that may be required. The Otago Regional Council does not intend that environmental effects should be “fully mitigated” or fully compensated in every case. The actual amount of particular contributions will vary depending upon the circumstances.

In considering the use to which financial contributions may be put, the Otago Regional Council may consult special interest groups as it considers appropriate.

17.2 Circumstances, purpose and method of determining contribution amount

A financial contribution condition may be imposed on any resource consent in the circumstances and for the purposes set out below. Contributions may be in the form of land or money or a combination of these. Contributions of money to the Council must be used for the general purpose for which such contributions were taken.

The following provisions set out circumstances and purposes for which financial contributions may be imposed and used, and the method of determining the level of the contribution in each case.

17.2.1 To enable legal public access to and along the margins of lakes and rivers

Circumstances: Where legal public access to or along lake or river margins will be restricted by the activity for which a resource consent is granted, and the effects cannot be avoided.

Purposes: To offset such effects by providing money, land, or a combination of both for alternative legal public access.

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual cost of providing legal public access sufficient to offset adverse effects on such access.

17.2.2 To enhance amenity values on the margins of lakes and rivers

Circumstances: Where the activity, for which a resource consent is granted, occupies or adversely affects any part of a lake or river margin which contains facilities or space used by the public, and the effects cannot be avoided.

Purposes: To offset such effects by providing money, land, or a combination of both for public open space or public facilities at an alternative location within the lake or river margins, in the same general locality or serving the same general community (including a contribution to any public reserves).

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual cost of providing land to provide public open space or public facilities of a reasonably equivalent standard or extent to those which are adversely affected by the granting of the resource consent.

17.2.3 To maintain or enhance riparian vegetation or riparian habitat

Circumstances: Where the activity for which a resource consent is granted will, or is likely to, result in destruction or damage to riparian vegetation or habitats, and the effects cannot be avoided.

Purposes: To offset the loss of vegetation by providing money, land, or a combination of both to plant, transplant or maintain, new or existing vegetation elsewhere in the same general locality.

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual costs of the works and of providing land to provide for planting, transplanting or maintaining new or existing vegetation.

17.2.4 To enable landscaping or planting

Circumstances: Where the activity for which a resource consent is granted is likely to cause or contribute to adverse effects on the natural character of the lake or river, or the amenity values supported by it, and the effects cannot be avoided.

Purposes: To offset the adverse effects of land clearance, land disturbance and structures in a lake or river or its marginal area by providing money, land, or a combination of both for the purposes of landscaping or planting elsewhere in the same general locality.

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual costs of carrying out such works and of providing land sufficient to offset the adverse effects of the activity.

17.2.5 To protect the bed of a lake or river or its margins

Circumstances: Where the activity for which a resource consent is granted will, or is likely to, contribute to adverse effects on the bed or margins of a lake or river, and the effects cannot be avoided.

Purposes: To offset such effects by providing money, land, or a combination of both for works which protect the bed or margin of a lake or river, including maintenance and planting of vegetation, such as riparian protection and erosion protection works in the same general locality.

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual cost of works reasonably required to offset or reasonably compensate for such effects.

17.2.6 To protect, maintain or restore sites, buildings, places or areas of historic or cultural importance

Circumstances: Where the activity for which consent is granted will adversely affect a historic site, building, place or area or one of cultural or spiritual significance to Kai Tahu, in the bed of a lake or river, and the effects cannot be avoided.

Purposes: To offset such effects by providing money, land, or a combination of both for contributing to protection, maintenance or restoration of some alternative historic or cultural site elsewhere within lake or river margins in the same general locality.

Method of determining contribution amount:

The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual cost of works and of purchasing land reasonably required to offset such effects.

17.2.7 To protect aquatic ecosystems or their habitat

Circumstances: Where the activity for which a resource consent is granted is likely to cause or contribute to adverse effects on any ecosystem values, particularly those

identified in Schedule 1A of this Plan, and the effects cannot be avoided.

Purposes: To offset the adverse effects of the activity by providing money, land, or a combination of both to protect ecosystem values or habitats beyond the area occupied by, or immediately affected by, the activity.

Method of determining contribution amount:
The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual costs of works and of providing land sufficient to offset such effects.

- 17.2.8 To:**
- (a) **Improve Regionally Significant Wetlands or regionally significant wetland values; or**
 - (b) **Create or reinstate wetland habitat or wetland values.**

Circumstances: Where the activity for which consent is granted will have an adverse effect on a Regionally Significant Wetland or a regionally significant wetland value.

Purposes: To offset the effects of the activity by providing money, land or a combination of each, to:

- (a) Improve Regionally Significant Wetlands or regionally significant wetland values; or
- (b) Make alternative provision for any loss of Regionally Significant Wetlands or regionally significant wetland values beyond the area used or immediately affected by the activity.

Method of determining contribution amount:
The amount of the contribution will be determined having regard to the criteria set out in 17.3, but will reflect the actual costs of works and of providing land sufficient to offset such effects.

17.3 Financial contribution assessment criteria

17.3.1 In deciding whether or not to impose financial contributions and the types of contributions, the Otago Regional Council will have particular regard to the following matters:

1. The extent to which any unavoidable adverse effect resulting from the activity can and should be remedied or mitigated; and
2. The extent to which the applicant has made, or has undertaken to make, some form of compensation for such unavoidable adverse effect; and

3. The extent to which a financial contribution may offset any unavoidable adverse effect caused by or contributed to by the activity; and
4. The extent to which a contribution is required to achieve objectives and policies of this Plan; and
5. The extent to which a financial contribution can be applied as close as possible to the site where the adverse effects occur or, where this is not practicable, the extent to which those people or communities most directly affected can benefit from the positive environmental effects that result from the financial contribution; and
6. The reasonableness of the contribution and consistency with the purposes of the Resource Management Act; and
7. Any other financial contribution required by any other statutory authority with respect to that activity and the extent to which financial contributions have previously been made or facilities have been provided.

17.3.2 In deciding the actual value of the financial contribution required, the Otago Regional Council will have particular regard to:

1. The significance of the effects attributable to the activity;
2. Where such effects are contributed to by other activities, the extent to which those effects can be reasonably attributed to the activity for which consent is granted; and
3. The extent to which any positive effects of the activity offset any adverse effects; including facilities already provided.

17.3.3 In imposing a financial contribution the following general provisions will apply:

1. All financial contributions shall be GST inclusive.
2. Where the financial contribution is, or includes, a payment of money, the Council may specify in the condition:
 - (a) The amount to be paid by the consent holder or the methods by which the amount of the payment shall be determined;
 - (b) How payment is to be made, including whether payment is to be made by instalments;
 - (c) When payment shall be made;
 - (d) Whether the amount of the payment is to bear interest and, if so, the rate of interest;
 - (e) If the amount of the payment is to be adjusted to take account of inflation and, if so, how the amount is to be adjusted;
 - (f) Whether any penalty is to be imposed for default in payment and, if so, the amount of the penalty or formula by which the penalty is to be calculated.
3. Where the financial contribution is, or includes, land, the value of the land shall be determined by the Council. In granting a consent the Council

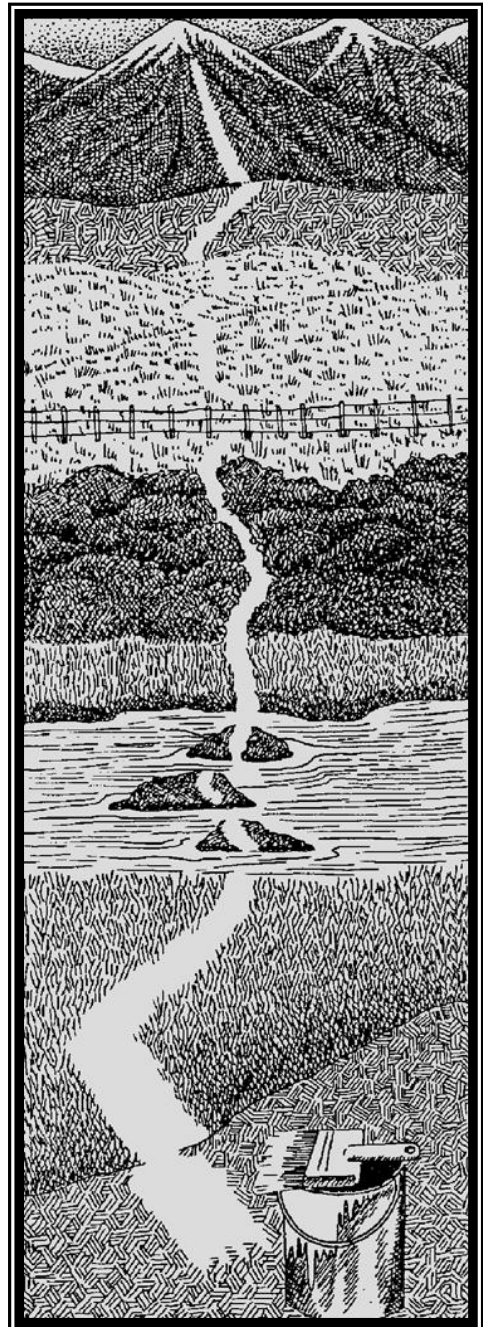
FINANCIAL CONTRIBUTIONS

shall give reasons in its decision for its assessment of the value of the land.

4. Where the financial contribution is, or includes, land the Council may specify:
 - (a) The location and the area of the land;
 - (b) When and how the land is to be transferred to, or vested in, the Council.

18

Cross Boundary Issues



18.1 Introduction

An activity which makes use of Otago's water resources can create an adverse effect on adjacent areas outside the immediate vicinity of the activity. Where that impact occurs on the water resource, the provisions of this Regional Plan: Water will apply to ensure an integrated and coordinated approach is taken.

However, some activities associated with the discharge of contaminants, the taking of water, the use of the beds and margins of a water body, the use or development of a wetland or the use of groundwater have the potential to create adverse effects on land areas. These adverse effects include the possible loss of the natural character of an area or the acceleration of naturally occurring erosion.

In a similar way, the effects of activities occurring outside of the water resource can adversely affect the water resource, particularly in terms of water quality and quantity. Land use activities can, amongst other things, result in increased sedimentation, nutrient runoff and a reduction in flows.

Where the adverse effects of an activity occur in an area under the management of another agency, administrative processes are required to ensure that the cross-boundary nature of the effect is considered, and where necessary taken into account by the agency responsible for the management of that resource. Establishing processes between local authorities in order to deal with those cross-boundary issues is required.

It is important that the cross-boundary issues are identified, agreed to and are dealt with in an efficient and effective manner in order that any adverse effects of those issues are avoided, remedied or mitigated.

18.2 Methods

In order to deal with cross-boundary issues as they arise, the Otago Regional Council will use the following methods:

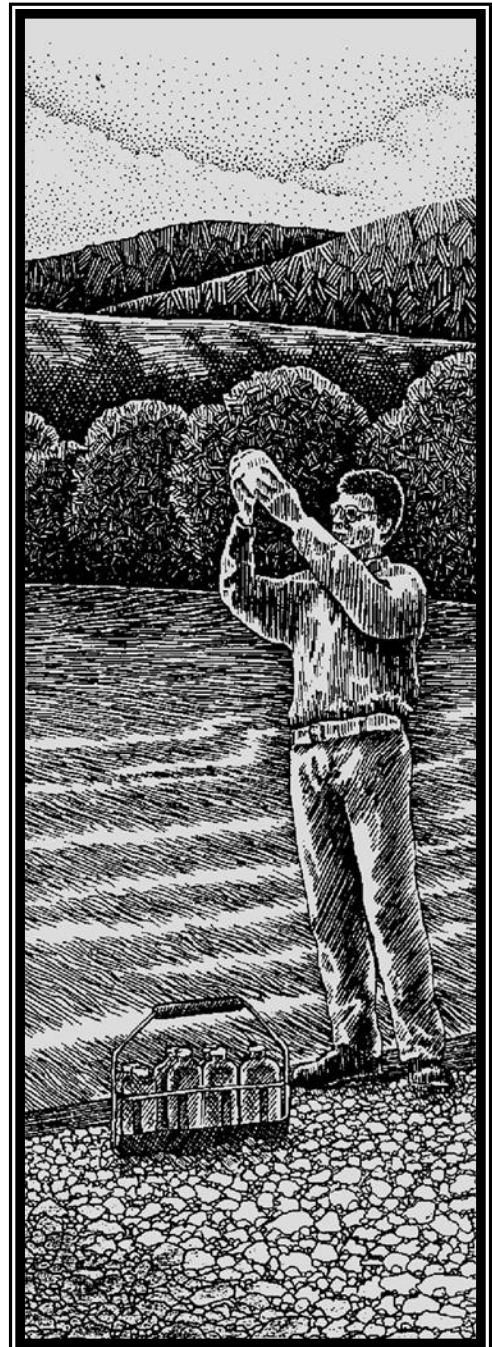
- 18.2.1 To liaise with adjacent regional councils over issues of concern related to the management of the water resource.**
- 18.2.2 To promote and encourage the development of protocols with adjacent territorial local authorities and regional councils for resolving cross-boundary issues.**
- 18.2.3 To consult with all agencies having responsibilities for the sustainable management of aspects of Otago's environment.**
- 18.2.4 To promote and encourage joint working groups, joint council committees and other joint approaches between appropriate territorial local authorities and regional councils to consider cross-boundary issues.**
- 18.2.5 To combine with appropriate territorial local authorities and regional councils in jointly processing resource consent applications that cross administrative boundaries.**

Explanation and principal reasons for adopting

Processes to resolve cross-boundary issues will be based on consultation and communication between Otago's local authorities and with adjacent local authorities. Various approaches employing joint groups, committees or other means can be used to facilitate the consideration and decision-making between different authorities over issues that cross their boundaries.

19

Monitoring and Review



19.1 Introduction

The Resource Management Act 1991 requires the Otago Regional Council to gather information and to undertake or commission such research as is necessary to carry out effectively their functions under the Resource Management Act (Section 35(1)). Section 35(2) of the Resource Management Act also requires that the Otago Regional Council monitor:

- (a) The state of the regional environment to the extent that is appropriate to enable the Council to effectively carry out its functions (baseline monitoring or environmental monitoring);
- (b) The suitability and effectiveness of any policy statement or plan, or proposed policy statement or plan for the region, and the exercise of any functions, powers or duties delegated or transferred by it (process monitoring); and
- (c) Compliance of resource consents (compliance monitoring).

This monitoring will be undertaken in terms of the framework set out in the Regional Policy Statement for Otago.

19.2 Elements to be monitored

Subject to the requirements of the Regional Policy Statement for Otago and the provisions of its Annual Plan, the Otago Regional Council will monitor the elements of Otago's water resources, and the effects of their use and development on the environment, as necessary to assess the suitability and effectiveness of the objectives and policies within this Plan. A regional monitoring strategy will be prepared, that is implemented in detail through the Annual Plan. In considering the elements requiring monitoring, the Otago Regional Council will have particular regard to the anticipated environmental results identified in Chapters 5 to 10 of this Plan.

19.3 Monitoring techniques

In monitoring elements of Otago's water resources necessary to determine the suitability and effectiveness of the objectives and policies within this Regional Plan: Water, the following techniques may be used:

1. Analysis of feedback, compliments, complaints received and responses to complaints.
2. Water levels and flows, and water use surveys, pertaining to Otago's surface and groundwater resources.
3. Water quality surveys, incorporating both chemical and biological monitoring methods.
4. Requiring self-monitoring of consents, where necessary, and the provision of the collected information to the Otago Regional Council for audit.
5. Compliance audit monitoring, at appropriate intervals, to ensure the conditions on resource consents are being adhered to.
6. Maintaining a database of resource consents issued.
7. Commission research, as necessary, to provide additional information on the

environment of water bodies.

8. Where appropriate, develop and implement joint initiatives with other local authorities, government departments, Kai Tahu, water user groups, land care groups and other agencies to monitor key aspects of Otago's water body environment.
9. Make available data held by the Otago Regional Council and seek the transfer between agencies and territorial local authorities of information on Otago's water resources.

19.4 Review

This Regional Plan: Water could be in force for a period no longer than 10 years, unless reviewed earlier. Any such review will be carried out in accordance with the First Schedule of the Resource Management Act. In considering the need to review this Plan, the Otago Regional Council will have regard to the extent to which any of the following matters affect the framework established by, and the contents of, the Plan:

1. Changes in legislation dealing with any aspect of the management of water and water bodies.
2. Improved knowledge and understanding of Otago's water resources.
3. Issues identified by the monitoring of the suitability and effectiveness of the objectives and policies within this Regional Plan: Water.
4. The development, implementation and review of the Regional Policy Statement and other regional plans by the Otago Regional Council.
5. The development, implementation and review of district plans by Otago's territorial local authorities.
6. Requests for a plan change or review made by any person in accordance with Part II of the First Schedule of the Resource Management Act.

20

Schedules



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1. Schedule of natural and human use values of Otago's surface water bodies

This schedule identifies some of the natural and human use values of Otago's lakes and rivers. These are the characteristics of a water body which are important to, or are an essential part of, ecological communities, or are enjoyed or utilised by people and communities. The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1-A8 for subregions).

The identification of natural and human use values supported by Otago's lakes and rivers provides a mechanism for recognising the existence of values which need to be taken into account and given appropriate protection in managing water use and land use activities (see Policy 5.4.2). The opportunity to provide such protection will arise when preparing or reviewing regional and district plans under the Resource Management Act, and when considering applications for resource consents.

This schedule of natural and human use values is divided into five parts:

- (a) Schedule 1A: Natural values (page 20-6);
- (aa) Schedule 1AA: Otago Resident Native Freshwater Fish – Threat Status (page 20-47)
- (b) Schedule 1B: Water supply values (page 20-48);
- (c) Schedule 1C: Registered historic places (page 20-51);
- (d) Schedule 1D: Spiritual and cultural beliefs, values and uses of significance to Kai Tahu (page 20-53).

The natural values identified in Schedule 1A are specifically related to Part II of the Resource Management Act but are limited to the attributes of the aquatic ecosystem that support indigenous flora and fauna, trout and salmon, and the regionally significant presence of gamebirds. The outstanding features and landscapes relate to those in Part II of the Act or those identified in the Water Conservation (Kawarau) Order, which this Plan recognises.

Natural and human use values are not limited to those characteristics identified in the schedule. The natural character and amenity values of lakes and rivers are also important natural and human use values, which are given particular regard to by Policies 5.4.8 and 5.4.9. The non-listing of values in Schedule 1A is not to be taken as meaning that an area, value or habitat is not important or worthy of protection.

Some water bodies may be wholly or partly wetland, with regionally significant wetland values. These water bodies may be identified in Schedule 9.

This schedule is not intended to represent a comprehensive or exhaustive list of natural and human use values. It contains information available during the preparation process of this Plan. There is now additional information available for many water bodies, however there may still be lakes or rivers for which there is no

SCHEDULE 1: NATURAL AND HUMAN USE VALUES OF
OTAGO'S SURFACE WATER BODIES

or insufficient information. Water bodies not included in the schedule, but in close proximity to those that have values identified, may share similar values.

Conversely, identification of a particular value for a river does not necessarily mean that value occurs at every point throughout that river. Identification does, however, provide a starting point, in identifying what values are expected to occur.

1A Schedule of natural values

The following schedule identifies natural values supported by Otago’s lakes and rivers. These include ecosystem values, outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitat of indigenous fauna, and areas with a high degree of naturalness.

The areas of significant indigenous vegetation and significant habitat of indigenous fauna are included where they meet criteria under Policy 10.5.2 of the Regional Policy Statement for Otago. Other scheduled values are established to provide certainty and to meet the requirements of the Objectives and Policies in Chapter 6 of the Regional Policy Statement for Otago.

The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1–A8 for subregions).

Note the codes for ecosystem values in Column 2 of Schedule 1A are given in Table 3.

Table 3: Codes for ecosystem values supported by lakes and rivers

Ecosystem Value	Code	Explanation
Physical Characteristics		
Size	Psize	Large water bodies supporting high numbers of particular species, or habitat variety, which can provide for diverse life cycle requirements of a particular species, or a range of species.
Unimpeded access	Ppass	Access within the main stem of a catchment through to the sea or a lake unimpeded by artificial means, such as weirs, and culverts.
Substrata: Macrophyte Boulder Gravel Sand Silt/mud Bedrock	Pplant Pboulder Pgravel Psand Psilt Prock	Refers to the bed composition of importance for resident biota.
Habitat Characteristics		
Spawning areas	Hspawn	Refers to presence of significant fish spawning areas: (t)=trout; (s)=salmon.
Juvenile rearing areas	Hjuve	Refers to presence of significant areas for development of juvenile fish: (t)=trout; (s)=salmon.
Riparian vegetation	Hriparian	Refers to presence of riparian vegetation of significance to aquatic habitats.

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Ecosystem Value	Code	Explanation
Freedom from biological nuisances	Exoticfree Weedfree Willowfree	Refers to absence of: exotic species of fish; aquatic pest plants (eg Lagarosiphon) identified in the Pest Management Strategy for Otago 2009; Crack willow.
Species Characteristics		
Exotic game fish: trout, salmon	Trout Rtrout Salmon	Refers to significant presence of trout. Refers to regionally significant presence of trout. Refers to significant presence of salmon.
Fishery values: eels	Eel	Refers to significant presence of eels.
Indigenous fish diversity	Fishdiv	Refers to presence of a significant range of indigenous fish species.
Indigenous fish – rare species	Rarefish	Refers to presence of indigenous fish species threatened with extinction.
Indigenous waterfowl diversity	Birddiv	Refers to presence of a significant range of indigenous waterfowl.
Indigenous waterfowl - rare species	Birdrare	Refers to presence of indigenous waterfowl threatened with extinction.
Indigenous Invertebrates diversity	Invdiv	Refers to presence of a significant range of indigenous invertebrates.
Indigenous Invertebrates - rare species	Invrare	Refers to presence of indigenous invertebrates threatened with extinction.
Indigenous- aquatic vegetation	Sigveg	Refers to presence of significant indigenous aquatic vegetation.
Gamebirds	Gbird	Refers to regionally significant presence of gamebirds.

Note that all map references given in Schedule 1A refer to the NZMS 260 series.

SCHEDULE 1A: NATURAL VALUES

North Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Welcome Creek	Hspawn(t), Weedfree, Trout, Salmon. In divid in headwaters			
Unnamed former tributary of the Pacific Ocean a.k.a. Temby Swamp Stream	Ppass, Pgravel, Hspawn(t), Hjuve(t), Trout			
Waiareka Creek	Weedfree, Hspawn (inanga spawning below J42:435586)			
Kakanui River (note, the Kakanui-Kauru Alluvium Aquifer forms an integral part of the water body)	Psize, Ppass, all substrata, Weedfree, Hspawn(t), (inanga spawning below J42:443574), Hjuve, Trout, Eel, Rarefish, Fishdiv. Willowfree, Hriparian upstream of I41:275733. Invrare (North branch) upstream of I41:110675		<i>Significant habitat for longjaw galaxiid and koaro. Significant habitat for lamprey (uncommon in Otago).</i>	A high degree of naturalness above Clifton Falls.
Kauru River	Pgravel, Weedfree, Rarefish, Fishdiv		<i>Significant habitat for longjaw galaxiid.</i>	
Kurinui Creek a.k.a. Big Kuri Creek	Weedfree. Invrare upstream of J42:334392			
Waianakarua River	Ppass, Pgravel, Hjuve, Hriparian, Weedfree, Hspawn (inanga spawning downstream of J42:403485), Rarefish, Fishdiv, Eel		<i>Significant habitat for koaro.</i>	A high degree of naturalness above afforested areas of the catchment.
South Branch Waianakarua	Ppass, Pgravel, Hjuve, Hriparian, Weedfree, Fishdiv. Invrare upstream of J42:305410			
Shag River (Waihemo) (note, the Shag Alluvium Aquifer forms an integral part of the water body)	Psize, Ppass all substrata, Weedfree, Hspawn (inanga spawning below J43:351233), Trout(t), Eel, Rarefish. In divid in mid reaches		<i>Significant habitat for flathead galaxiid and koaro. Significant habitat for lamprey (uncommon in Otago).</i>	
Siberia Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	

SCHEDULE 1A: NATURAL VALUES

North Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Unnamed tributary of the Shag River (Waihemo) a.k.a. Deem Burn	Weedfree, Rarefish		<i>Significant habitat for koaro upstream of I42:224388.</i>	
Pigroot Creek	Pboulder, Hriparian, Weedfree. Invrare upstream of I42:072530			
Happy Valley Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Tipperary Creek	Weedfree, Rarefish		<i>Significant habitat for hybrid galaxiid species.</i>	
Deepdell Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Trotters Creek	Weedfree, Hriparian, Hjuve, Fishdiv, Rarefish. Invrare upstream of J42:330322		<i>Significant habitat for giant kokopu and koaro. Significant habitat for lamprey (uncommon in Otago).</i>	
Pigeon Creek	Weedfree, Hriparian, Hjuve, Fishdiv, Rarefish. Invrare upstream of J42:335339		<i>Significant habitat for giant kokopu.</i>	

SCHEDULE 1A: NATURAL VALUES

Maniototo subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Taieri River upstream of Tiroiti	Psize, Pgravel, Ppass, Hspawn(t&s), Hjuve, Weedfree, Eel, Trout downstream of Paerau weir. Hriparian, Trout, Birddiv, Invdiv, Rarefish upstream of Paerau weir. Invrare upstream of H43:544013, Gbird	<ul style="list-style-type: none"> a) Deep gorge (Taieri Falls) cut into distinct rocky scarp, schistose landscape, in main stem between H43:110567 and Canadian Flat. b) Deep gorge (Paerau Gorge) cut into distinct rocky scarp, schistose landscape, in main stem from Paerau Reservoir to NZMS 260 H42:369727. c) Scroll plain (Serpentine Flat) consisting of a meandering channel pattern and oxbow lakes and wetlands, from confluence with Bonds Creek to Paerau Reservoir. d) Scroll plain consisting of a meandering channel pattern and oxbow lakes and wetlands, from confluence with Linn Burn to confluence with Shepherds Hut Stream. 	<p><i>Significant habitat for flathead galaxiid, including tributaries upstream of Paerau weir.</i></p> <p><i>Significant habitat for lamprey (uncommon in Otago).</i></p>	
Ailsa Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Bullocky Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Elbow Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Unnamed tributary of the Taieri River at H43:600125	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	

SCHEDULE 1A: NATURAL VALUES

Maniototo subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Horse Burn	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Rock and Pillar Creek	Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree. Invrare upstream of H43:772290			A high degree of naturalness above 900 metres asl.
Styx Creek	Weedfree, Hspawn(t), Hjuve(t), Hriparian, Exoticfree. Invrare upstream of H43:744254			A high degree of naturalness above 900 metres asl.
Logan Burn	Weedfree, Hspawn, Hjuve, Hriparian, Trout			A high degree of naturalness above 900 metres asl.
Shepherds Hut Creek, McHardies Creek and Loganburn Reservoir	Hriparian, Hspawn(t), Hjuve			
Linn Burn	Pboulder, Weedfree, Rarefish. Invrare upstream of H43:603294		<i>Significant habitat for flathead galaxiid.</i>	A high degree of naturalness above 600 metres asl.
Totara Creek	Weedfree, Trout (lower reaches), Rarefish. Invrare upstream of H42:595338		<i>Significant habitat for unidentified galaxiid species.</i>	A high degree of naturalness above 600 metres asl.
Sow Burn	Weedfree, Hspawn, Hjuve, Hriparian, Salmon, Trout			A high degree of naturalness above 900 metres asl.
Cambridge Creek (tributary of the Sow Burn)	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	A high degree of naturalness above 900 metres asl.
Ewe Burn	Hspawn(t), Weedfree, Rarefish, Trout		<i>Significant habitat for roundhead galaxiid.</i>	
Pig Burn	Hspawn, Hjuve, Trout			
Kye Burn	Psize, Ppass, Weedfree, Hriparian, Hspawn(t), Hjuve, Rarefish, Eel, Trout	Areas of old gold sluicing landscapes.	<i>Significant habitat for flathead galaxiid and roundhead galaxiid.</i>	A high degree of naturalness above 900 metres asl.

SCHEDULE 1A: NATURAL VALUES

Maniototo subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Healy Creek	Weedfree, Rarefish, Fishdiv		<i>Significant habitat for unique community of flathead and roundhead galaxiids. Type locality for flathead galaxiid.</i>	
Little Kye Burn	Weedfree, Hspawn(t), Trout, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Swin Burn	Weedfree, Hspawn(t), Hjuve(t), Hriparian, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	

SCHEDULE 1A: NATURAL VALUES

Central Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Clutha River/Mata-Au between Alexandra and Lake Wanaka	Psize, Prock, Pgravel, Hspawn(t&s), Hriparian, Hjuve(t&s), Trout, Eel, Salmon, Rarefish, Birddiv		Significant habitat for flathead galaxiid (tributaries).	
Chapmans Gully	Invrare upstream of G42:237420			A high degree of naturalness above 900 metres asl.
Luggate Creek	Weedfree, Rarefish. Invrare upstream of F40:040924		Significant habitat for koaro.	
Princess Burn	Weedfree. Invrare upstream of F40:064925			
Manuherikia River main stem	Pgravel, Hspawn(t), Hjuve, Hriparian, Weedfree, Eel, Trout. Invdiv in mid reaches. Birdrare above Falls Dam		Significant habitat: Areas of importance to internationally uncommon species - black fronted tern - above Falls Dam.	
Rocks Creek	Weedfree. Invrare upstream of H40:620976			
Unnamed tributary of the Manor Burn at G42:435365	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	
Chatto Creek	Pboulder, Hspawn, Hriparian, Weedfree, Trout, Eel, Rarefish		Significant habitat for roundhead galaxiid.	
Devonshire Creek	Pboulder, Hriparian, Hspawn, Hjuve, Trout			
Ophir Drainage Channel	Weedfree, Rarefish		Significant habitat type locality for roundhead galaxiid.	
Dunstan Creek	Pgravel, Weedfree, Hriparian. Hjuve (t), Hspawn (t), Trout in lower reaches	Old gold sluicing landscapes at Blue Lake.		A high degree of naturalness above 900 metres asl.
Ida Burn and Pool Burn	Hspawn, Hjuve, Trout, Eel			
Donald Stuarts Creek	Pgravel, Weedfree. Exoticfree, Invrare upstream of H41:508840			A high degree of naturalness above 900 metres asl.
Dovedale Creek	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	

SCHEDULE 1A: NATURAL VALUES

Central Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Earnsclough or Fraser River	Pgravel, Hspawn(t), Hjuve(t). Hriparian (except in lower reaches). Weedfree, Trout, Eel. Exoticfree in headwaters. Invrare upstream of F42:098420			A high degree of naturalness above 900 metres asl.
Bannock Burn	Pgravel, Hjuve, Hspawn, Eel, Trout			
Low Burn	Pboulder, Weedfree, Hspawn(t), Hjuve(t)			A high degree of naturalness above 900 metres asl.
Sheepskin Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Schoolhouse Creek	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Lindis River	Pgravel, Weedfree, Hspawn(t), Hjuve(t), Eel, Trout			A high degree of naturalness above 900 metres asl.
John Bull Creek	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Amisfield Burn	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Cardrona River	Pboulder, Psand, Pgravel, Hspawn, Hjuve, Weedfree, Trout, Eel, Rarefish. Invrare (mid to upper reaches)		<i>Significant habitat for flathead galaxiid</i>	A high degree of naturalness above 900 metres asl
Spotts Creek	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Timber Creek	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Branch Burn	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Boundary Creek	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Wrights Gully	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Maori Gully	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Kawarau River <i>between Lake Dunstan and Lake Wakatipu</i>	Psize, Pgravel, Prock, Trout, Salmon, Eel, Rarefish. Weedfree upstream of Lake Dunstan	Outstanding: (a) for its wild, scenic characteristics; (b) natural characteristics, in particular the return flow in the upper section when the Shotover River is in flood; (c) for scientific values, in particular the return flow in the upper section when the Shotover is in flood; (d) for recreational purposes, in particular rafting, jet boating and kayaking. Spectacular and rugged river gorge, schistose landscape, fast flowing white water and rapids, old gold sluicing landscape, from confluence with Arrow River to Lake Dunstan.	<i>Significant habitat</i> for koaro including many tributaries.	
Soho Creek	Weedfree. Invrare upstream of F41:866830			
Lake Hayes	Psand, Psilt, Weedfree, Hriparian, Eel, Trout			
Lakes Johnson, Luna, Kirkpatrick and Dispute	Hriparian, Eel, Trout			
Horne Creek	Weedfree. Hspawn(t), Hjuve(t), Ppass, Trout in lower reaches			
Moke Lake	Hriparian, Weedfree (also free of Elodea), Eel, Trout, Sigveg		<i>Significant vegetation:</i> Rare association of aquatic plants.	

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Lake Wakatipu	Psize, Pplant, Weedfree, Hjuve(t&s), Hriparian, Eel, Trout, Salmon, Sigveg, Rarefish, Invrare	<p>Outstanding:</p> <p>(a) as a fishery;</p> <p>(b) for its scenic characteristics;</p> <p>(c) for scientific value, in particular water clarity, and bryophyte community;</p> <p>(d) for recreational purposes, in particular boating;</p> <p>(e) for historical purposes;</p> <p>(f) for significance in accordance with tikanga Maori, in particular sites at the head of the lake, and the legend of the lake itself.</p> <p>Scenic values within the wider landscape context of the surrounding mountains, particularly:</p> <ul style="list-style-type: none"> • clear blue colour of the water, • river deltas, and • beaches, particularly uncommon beach features between Rat Point and White Point. 	<p><i>Significant habitat</i> for koaro including many tributaries.</p> <p><i>Significant vegetation:</i> Rare association of aquatic plants.</p>	
Unnamed tributary of Lake Wakatipu at F42:747392	Weedfree, Invrare			
One Mile Creek	Weedfree. Invrare upstream of E41:665659			
Gorge Creek	Weedfree. Invrare upstream of E41:408857			

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Wye, Kingston and Staircase Creeks	Pboulder, Hriparian, Weedfree, Rarefish. Ppass in Staircase Creek only. Hspawn in lower reaches		<i>Significant habitat</i> for koaro.	A high degree of naturalness above 900 metres asl.
Streams from west and south of Richardson Mountains	Pboulder, Weedfree, Hjuve, Hspawn, Hriparian			A high degree of naturalness above 900 metres asl.
Buckler Burn, Precipice Creek or Temple Burn, Twelve Mile Creek or Ox Burn	Pboulder, Weedfree, Hspawn(t), Hjuve(t), Hriparian			A high degree of naturalness above 900 metres asl.
Rees River	Psize, Ppass, Hspawn(t), Hjuve(t), Weedfree, Hriparian, Eel, Salmon, Trout, Birddiv, Birdrare	<p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) Natural and physical qualities and characteristics that contribute to aesthetic coherence;</p> <p>(c) as habitat for wildlife;</p> <p>(d) for its scenic characteristics;</p> <p>(e) for significance in accordance with tikanga Maori, in particular sites at the mouth of the river.</p> <p>High level of naturalness - free from significant interference by human practices, from confluence with Hunter Creek to its source.</p> <p>System of braided gravel river channels, in main stem from Lake Wakatipu</p>	<i>Significant habitat:</i> Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wakatipu to confluence with Hunter Creek.	

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
		to confluence with Hunter Creek.		
Earnslaw Burn	Ppass, Hspawn, Hriparian, Hjuve, Trout, Weedfree, Salmon, Birddiv, Birdrare			A high degree of naturalness within Mount Aspiring/Tititea National Park.
Diamond Lake, Diamond Creek and Lake Reid	Ppass, Psand, Hspawn(t&s), Hjuve(t&s), Weedfree, Hriparian, Eel, Trout, Salmon (Quinnat), Birddiv, Rarefish	Outstanding (a) as habitat for wildlife and quinnat salmon; (b) as a fishery.	<i>Significant habitat</i> for koaro.	
Diamond Lake tributary at E40:447978	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	
Dart River/Te Awa Whakatipu	Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Salmon, Birddiv, Birdrare	Outstanding: (a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters; (b) Natural and physical qualities and characteristics that contribute to aesthetic coherence; (c) Natural and physical qualities and characteristics that contribute to cultural attributes; (d) Biological and genetic diversity of ecosystems; (e) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience; (f) as habitat for wildlife; (g) for its scenic characteristics; (h) for its natural characteristics, in	<i>Significant habitat:</i> Presence of a breeding population of threatened endemic species - blue duck - above Beans Burn confluence to its source. Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wakatipu to confluence to Beans Burn.	

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
		<p>particular natural turbidity;</p> <p>(i) scientific value, in particular natural turbidity;</p> <p>(j) for significance in accordance with tikanga Maori, in particular sites at the mouth of the river.</p> <p>High level of naturalness - free from significant interference by human practices above Beans Burn confluence to its source.</p> <p>System of braided gravel river channels with delta, in main stem from Lake Wakatipu to confluence with Beans Burn.</p>		
Route Burn	Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birddiv, Birdrare	<p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) Natural and physical qualities and characteristics that contribute to aesthetic coherence;</p> <p>(c) Natural and physical qualities and characteristics that contribute to cultural attributes;</p> <p>(d) Natural and physical qualities and characteristics that contribute to recreational attributes;</p> <p>(e) Biological and genetic diversity of ecosystems;</p>		A high degree of naturalness within Mount Aspiring/Tititea National Park.

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
		<p>(f) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience.</p> <p>High level of naturalness - free from significant interference by human practices.</p>		
Greenstone River, Caples River	Psize, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Birdrare	<p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) natural and physical qualities and characteristics that contribute to recreational attributes;</p> <p>(c) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience.</p> <p>High level of naturalness - free from significant interference by human practices.</p>		A high degree of naturalness within National Park and DoC estate.
Lochy River	Ppass, Weedfree, Hspawn, Hjuve, Eel, Trout	<p>Outstanding:</p> <p>(a) as a fishery;</p> <p>(b) for recreational purposes, in particular fishing.</p> <p>Wild and scenic characteristics, in main stem from Lake Wakatipu to its source.</p>		A high degree of naturalness above 900 metres asl.
Collins Creek	Hspawn(t), Hjuve(t)			

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Streams flowing to Lake Wakatipu between Halfway Bay and Elfin Bay, including Von River	Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Rarefish	Outstanding: (a) as a fishery; (b) for recreational purposes, in particular fishing. Wild and scenic characteristics, in Von main stem from Lake Wakatipu to its source.	<i>Significant habitat</i> for roundhead galaxiid (Von catchment).	A high degree of naturalness above 900 metres asl.
Bullock Creek	Hspawn(t), Hjuve(t), Trout			
Lake Wanaka	Psize, Psand, Eel, Trout, Salmon, Sigveg, Rarefish, Invrare	Scenic values within the wider landscape context of the surrounding mountains, particularly the unmodified lake level, water quality and colour of the water.	<i>Significant vegetation:</i> Rare association of aquatic plants.	
Unnamed tributary of the Motatapu River at F40:825058	Weedfree, Invrare			
Unnamed tributary of the Motatapu River at F40:827055	Weedfree, Invrare			
Matukituki River	Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian, Eel, Trout, Birddiv, Birdrare, Rarefish	System of braided gravel river channels, in main stem from Lake Wanaka to its source.	<i>Significant habitat:</i> Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wanaka to its source. <i>Significant habitat</i> for koaro including many tributaries.	A high degree of naturalness within Mount Aspiring/Tititea National Park.

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Streams flowing off West Wanaka, including Albert Burn	Ppass, Hspawn, Hjuve, Hriparian, Weedfree, Trout			A high degree of naturalness within Mount Aspiring/Tititea National Park. A high degree of naturalness above 900 metres asl.
Wilkin River	Psize, Pgravel, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Trout, Eel, Birddiv, Birdrare	High level of naturalness - free from significant interference by human practices above Kerin Forks to its source. System of braided, gravel river channels, in main stem from confluence with Makarora River to Kerin Forks	<i>Significant habitat:</i> Presence of a breeding population of threatened endemic species - blue duck - above upper forks to source. Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from confluence with Makarora River to Kerin Forks.	A high degree of naturalness within Mount Aspiring/Tititea National Park.
Young River	Psize, Ppass, Hriparian, Hspawn, Hjuve, Trout, Eel			A high degree of naturalness within Mount Aspiring/Tititea National Park.
Makarora River	Psize, Ppass, Pgravel, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birddiv, Birdrare	System of braided, gravel river channels with delta, in main stem between Lake Wanaka and confluence with Blue River.	<i>Significant habitat:</i> Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem between Lake Wanaka and confluence with Blue River.	A high degree of naturalness within Mount Aspiring/Tititea National Park.
Brady Creek	Weedfree, Rarefish		<i>Significant habitat for</i> koaro.	
Lake Hawea	Psize, Psand, Weedfree, Hjuve(t&s), Eel, Trout, Salmon	Scenic values within the wider landscape context of the surrounding mountains, particularly colour of the water.		

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Hunter River	Psize, Pgravel, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Birddiv, Birdrare	High level of naturalness - free from significant interference by human practices between Long Flat Creek confluence and its source System of braided, gravel river channels, in main stem from Lake Hawea to confluence with Long Flat Creek.	<i>Significant habitat:</i> Presence of a breeding population of threatened endemic species - blue duck - between Long Flat Creek confluence and its source. Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - from Lake Hawea to confluence with Long Flat Creek.	A high degree of naturalness within Mount Aspiring/Tititea National Park. A high degree of naturalness above 900 metres asl.
Dingle Burn	Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birdrare			A high degree of naturalness above 900 metres asl.
Timaru River	Ppass, Hspawn, Hjuve, Hriparian, Weedfree, Trout. Invrare between G39:308280 and G39:313294 (incl tributaries)			A high degree of naturalness above 900 metres asl.
Hawea River	Psize, Weedfree, Hspawn, Hjuve, Trout, Salmon, Eel			
Shotover River	Pgravel, Pboulder, Psand, Prock, Psize, Weedfree, Hriparian, Birddiv, Birdrare	Outstanding: (a) for its wild and scenic characteristics; (b) for its natural characteristics, in particular the high natural sediment load and active delta at confluence with Kawarau River; (c) scientific value, in particular the high natural sediment load and active delta at confluence with Kawarau River; (d) for recreational purposes, in particular	Lochnagar and Lake Creek, outstanding: (a) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience. <i>Significant habitat:</i> Areas of importance to internationally uncommon species - black fronted tern, banded dotterel - in main stem between	A high degree of naturalness above 900 metres asl.

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
		<p>rafting, kayaking and jet boating; (e) for historical purposes, in particular gold mining.</p> <p>Spectacular and rugged river gorge, schistose landscape, fast flowing white water and rapids, old gold sluicing landscape, in main stem between confluence with Iron Stone Stream and Arthur Point.</p> <p>Wild and scenic characteristics, from confluence with Iron Stone Stream to its source.</p>	Arthur Point and its source.	
Carmichaels Creek	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	
Deep Creek	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	
Skippers Creek	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	
Mill Creek	Pgravel, Psand, Hspawn, Hjuve, Weedfree, Rarefish		<i>Significant habitat</i> for roundhead galaxiid.	A high degree of naturalness above 900 metres asl.
Arrow River	Psize, Psand, Pgravel, Ppass, Hspawn, Hjuve, Weedfree, Trout			A high degree of naturalness above 900 metres asl.
Roaring Meg	Pboulder, Weedfree, Hriparian. Invrare upstream of F41:026844			A high degree of naturalness above 900 metres asl.
Nevis River	Psize, Ppass, Prock, Pgravel, Psand, Hspawn,, Hjuve, Weedfree, Eel, Trout, Birddiv, Birdrare. Invdiv above Nevis Crossing.	<p>Main stem gorge from Nevis Crossing to Kawarau River confluence: Outstanding (a) for its wild, characteristics; (b) for recreational purposes, in particular fishing and kayaking.</p> <p>Main stem above Nevis Crossing to source:</p>		A high degree of naturalness above 900 metres asl.

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
		<p>Outstanding</p> <p>(a) for its scenic, characteristics;</p> <p>(b) for recreational purposes, in particular fishing.</p> <p>High level of naturalness above Nevis Crossing to its source.</p> <p>Spectacular river gorge, white water and rapids, in main stem from Nevis Crossing to confluence with Kawarau River.</p>		
Unnamed tributary of the Nevis River at F43:820261	Hriparian, Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Sproules Creek	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Schoolhouse Creek	Weedfree. Invrare upstream of F42:870478			
Unnamed tributary of the Nevis River at F42:921450	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid</i>	
Unnamed tributary of the Nevis River at F42:951492	Weedfree. Invrare upstream of F42:003487			
Unnamed tributary of the Nevis River at F42:954541	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Nevis Burn	Weedfree. Invrare upstream of F42:870524			

SCHEDULE 1A: NATURAL VALUES

Lakes subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Unnamed tributary of the Nevis River at F42:959529	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	
Doolans Creek Left Branch	Weedfree. Invrare upstream of F42:860561			
Rastus Burn	Pboulder, Weedfree, Hspawn, Hriparian, Invrare upstream of F41:806641			A high degree of naturalness above 900 metres asl

SCHEDULE 1A: NATURAL VALUES

Roxburgh subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Clutha River/Mata-Au between Alexandra and Island Block	Psize, Psand, Pgravel, Prock, Hjuve, Eel, Trout, Salmon, Birddiv. Hspawn(s) below Roxburgh dam, Sigveg below Roxburgh dam		Significant habitat for lamprey (uncommon in Otago)	
Obelisk Creek	Weedfree. Invare upstream of G42:175339			
Elbow Creek	Weedfree, Rarefish		Significant habitat for koaro.	
Coal Creek	Weedfree. Invare upstream of G42:170321			
Teviot River	Pboulder, Weedfree, Willowfree (in upper reaches), Hjuve(t&s), Hspawn(t&s), Hriparian, Trout			
Lake Onslow	Hriparian, Hjuve(t), Hspawn(t), Trout			
Unnamed tributary of Lake Onslow at G43:458137	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	
Black Jacks Creek	Weedfree. Invare upstream of G43:210086			
Benger Burn	Pboulder, Weedfree, Hspawn(t&s), Hriparian, Rarefish		Significant habitat for koaro.	A high degree of naturalness above 900 metres asl.
Tima Burn	Weedfree, Rarefish		Significant habitat for koaro.	
Streams flowing from Old Man Range /Kopuwai	Pboulder, Hspawn(t), Weedfree, Hriparian			A high degree of naturalness above 900 metres asl.

SCHEDULE 1A: NATURAL VALUES

Strath Taieri subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Taieri River between Tiroiti and Pukerangi	Psize, Ppass, Psand, Pgravel, Weedfree, Hspawn(t), Hjuve, Hriparian, Eel, Salmon, Rarefish, Fishdiv, Trout		Significant habitat for flathead galaxiid (including many tributaries). Significant habitat for lamprey (uncommon in Otago) Significant habitat for Lower Taieri galaxiid and koaro in many tributaries below Middlemarch.	
Prices Creek	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	
Lug Creek	Pboulder, Hriparian, Eel, Weedfree. Invrare upstream of H43:862280			A high degree of naturalness above 900 metres asl.
Cap Burn, Mare Burn, Scrub Burn and Six Mile (upper)	Hriparian, Hspawn(t), Hjuve(t)			
Annetts Creek, Heeney Creek and House Creek	Hriparian, Hspawn(t), Hjuve(t)			
Six Mile Creek (lower)	Pgravel, Prock, Weedfree, Eel, Hriparian, Hspawn(t), Hjuve(t). Invrare upstream of H43:853243			
Last Creek, Nant Creek, Dewar Creek and Kirkland Creek	Pgravel, Hriparian, Hspawn(t), Hjuve(t)			
Nenthorn Stream	Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Rarefish		Significant habitat for flathead galaxiid.	
Black Rock Stream	Weedfree, Rarefish		Significant habitat for flathead galaxiid.	
Manuka Stream	Weedfree, Rarefish		Significant habitat for flathead galaxiid.	
Washpool Stream	Weedfree, Rarefish		Significant habitat for flathead galaxiid.	
Deighton Creek	Weedfree, Rarefish		Significant habitat for flathead galaxiid.	

SCHEDULE 1A: NATURAL VALUES

Strath Taieri subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Spratts Creek	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Sutton Stream	Pboulder, Weedfree, Hspawn(t), Hriparian, Hjuve, Trout, Eel			A high degree of naturalness above 900 metres asl.
Burgan Stream	Weedfree, Exoticfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Stony Creek	Weedfree, Rarefish. Invrare upstream of H44:603910		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Salt Lake (near Sutton)	Weedfree	A rare example of a natural salt lake.		
March Creek	Pboulder, Pgravel, Psand, Psilt, Weedfree			A high degree of naturalness above 900 metres asl.

SCHEDULE 1A: NATURAL VALUES

Waikouaiti/Lammermoor subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Waikouaiti River (excluding South Branch)	Psize, Ppass, Psand, Pgravel, Weedfree, Hspawn (t) (& inanga spawning between I43:240084 and I43:266087), Hjuve, Eel, Trout, Rarefish. Invrare between I43:183242 and I43:093297, and including tributaries between I43:148264 and I43:093297		<i>Significant habitat</i> for flathead galaxiid, hybrid galaxiid, banded kokopu and koaro.	
Unnamed tributary of the Waikouaiti River at I43:097281	Weedfree, Rarefish		<i>Significant habitat</i> for flathead galaxiid.	
Back Creek	Weedfree, Rarefish		<i>Significant habitat</i> for flathead galaxiid.	
Waikouaiti River South Branch	Weedfree, Ppass, Hspawn(t), Hjuve, Hriparian, Trout, Rarefish, Fishdiv		<i>Significant habitat</i> for koaro.	A high degree of naturalness within Scenic Reserve.
Unnamed tributary of the Waikouaiti River a.k.a. Merton Stream at I43:244065	Weedfree, Fishdiv, Rarefish		<i>Significant habitat</i> for lamprey (uncommon in Otago).	
Toll Bar Creek	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	
Flat Stream	Weedfree. Invrare in lower reaches			
Taieri River between Pukerangi and Outram	Psize, Ppass, Pgravel, Psand, Prock, Weedfree, Hspawn, Hjuve, Hriparian, Trout, Salmon, Eel, Fishdiv, Rarefish	Well defined, deep gorge (Taieri Gorge) cut into distinct rocky scarp, schistose landscape, in main stem between confluence with Ross Stream and Outram.	<i>Significant habitat</i> for Lower Taieri galaxiid (tributaries). <i>Significant habitat</i> for lamprey (uncommon in Otago).	
Traquair Burn	Weedfree, Eel, Fishdiv			
Smugglers Creek	Weedfree, Rarefish		<i>Significant habitat</i> (and type locality) for Lower Taieri galaxiid.	

SCHEDULE 1A: NATURAL VALUES

Waikouaiti/Lammermoor subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Deep Stream	Pgravel, Psize in lower reaches. Weedfree, Hspawn(t), Hjuve(t), Hriparian, Rarefish, Eel, Trout. Invrare upstream of H44:605910		<i>Significant habitat for Lower Taieri galaxiid.</i>	A high degree of naturalness above 900 metres asl.
Clarkes Stream	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid at H44:682930.</i>	
Unnamed tributary of Deep Stream at H44:660958	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Unnamed tributary of Deep Stream at H44:678947	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Barbours Stream	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Deep Creek	Pgravel, Weedfree, Hspawn(t), Hjuve, Hriparian, Trout. Invrare upstream of H44:623987			A high degree of naturalness above 900 metres asl.
Three O'clock Stream	Ppass, Weedfree, Hspawn(t), Hjuve, Hriparian, Willowfree, Trout, Rarefish, Fishdiv		<i>Significant habitat for flathead galaxiid and koaro.</i>	
Christmas Creek	Ppass, Pboulder, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Willowfree			A high degree of naturalness within Scenic Reserve.
Lee Stream	Psize, Ppass, Pgravel, Psand, Weedfree, Hspawn(t), Hjuve, Hriparian, Rarefish, Eel, Trout. Invrare upstream of I44:952867, and including tributaries upstream of I44:916868		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Black Rock Stream	Weedfree, Eel, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Broad Stream	Weedfree, Eel, Rarefish		<i>Significant habitat for koaro.</i>	
Canton Creek	Weedfree, Rarefish, Fishdiv		<i>Significant habitat for Lower Taieri galaxiid.</i>	

SCHEDULE 1A: NATURAL VALUES

Waikouaiti/Lammermoor subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Big Stream	Ppass, Pboulder, Hspawn(t), Hjuve(t), Willowfree, Weedfree, Eel, Rarefish, Trout			A high degree of naturalness within Scenic Reserve.

SCHEDULE 1A: NATURAL VALUES

Coastal subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Careys Creek	Pgravel, Weedfree, Hspawn(t), Hjuve(t), Rarefish, Fishdiv, In divid (upper reaches)		<i>Significant habitat</i> for koaro and banded kokopu. <i>Significant habitat</i> for lamprey (uncommon in Otago).	
Waitati River	Ppass, but major abstractions can result in very low flows in lower stretches. Pgravel, Weedfree, Hspawn (t) (&inanga spawning below I44:205925), Hjuve(t). Hriparian in headwaters. Trout, Rarefish, In divid (upper reaches)		<i>Significant habitat</i> for koaro. <i>Significant habitat</i> for lamprey (uncommon in Otago).	A high degree of naturalness within Silverpeaks Scenic Reserve.
Fergusons Creek	Weedfree. In rare above I44:170896			
Wetherstons Creek	Weedfree			
Orokonui Creek	Weedfree, Hspawn(t), Hjuve(t), Rarefish, Fishdiv		<i>Significant habitat</i> for giant kokopu, koaro and banded kokopu. <i>Significant habitat</i> for lamprey (uncommon in Otago).	
Foote Stream and Mihiwaka Stream	Weedfree, Rarefish		<i>Significant habitat</i> for koaro and banded kokopu.	
Water of Leith	Pgravel, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian Rarefish, Salmon, Trout		<i>Significant habitat</i> for giant kokopu and banded kokopu.	
Streams entering Otago Harbour (except Water of Leith)	Weedfree, Hspawn, Rarefish, Fishdiv, Exoticfree		<i>Significant habitat</i> for koaro and banded kokopu.	
Unnamed tributary of Otago Harbour a.k.a. Deborah Bay Stream at I44:252876	Weedfree, Rarefish		<i>Significant habitat</i> for koaro and banded kokopu.	

SCHEDULE 1A: NATURAL VALUES

Coastal subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Unnamed tributary of Latham Bay a.k.a. Latham Bay Stream at I44:280824	Weedfree, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Unnamed tributary of Otago Harbour a.k.a. Macandrew Bay Stream at I44:233793	Weedfree, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Unnamed tributary of Otago Harbour a.k.a. Otakou Stream at J44:318869	Weedfree, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Unnamed tributary of Papanui Inlet at J44:332820	Weedfree, Hspawn, Invrare			
Unnamed tributary of the Pacific Ocean at J44:345808 (Papanui Beach)	Weedfree, Hspawn, Invrare			
Robertsons Creek	Weedfree, Hspawn, Invrare			
Unnamed pond, Jones Creek at I44:115734	Weedfree, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Unnamed tributary of the Pacific Ocean at I44:241763 (Boulder Beach)	Weedfree, Hspawn, Fishdiv			
Tomahawk Lagoon	Psilt, Weedfree, Hriparian, Trout, Eel, Invrare			
Otokia Creek	Weedfree, Ppass, Hspawn, Hjuve, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Fern Stream	Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Fishdiv, Rarefish, Birddiv		<i>Significant habitat for banded kokopu.</i>	

SCHEDULE 1A: NATURAL VALUES

Coastal subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Flax Stream	Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Fishdiv, Rarefish, Birddiv		<i>Significant habitat for banded kokopu.</i>	
Unnamed tributary of the Taieri River a.k.a. Takitakitoa Stream	Ppass, Psilt, Weedfree, Hspawn, Hjuve, Hriparian, Birddiv, Eel, Rarefish		<i>Significant habitat for giant kokopu and banded kokopu.</i>	
Taieri River between Henley and the sea	Psize, Ppass, Psilt, Psand, Weedfree, Hspawn, Hjuve, Hriparian, Rarefish, Fishdiv, Trout, Salmon, Eel, Gbird	Lower Taieri Gorge	<i>Significant habitat for giant kokopu and banded kokopu.</i>	
Akatore Creek	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Eel, Trout, Fishdiv, Rarefish. Exoticfree upstream of H45:878565		<i>Significant habitat for koaro and banded kokopu.</i>	
Bull Creek	Hspawn, Hjuve, Hriparian, Weedfree, Fishdiv, Rarefish		<i>Significant habitat for koaro.</i>	
Big Creek	Hspawn, Hjuve, Hriparian, Weedfree, Fishdiv, Rarefish		<i>Significant habitat for koaro.</i>	
Lower Tokomairiro River main stem	Psand, Psilt, Pgravel Pplant, Psize, Ppass, Hspawn(t), Hriparian, Hjuve(t), Eel, Trout, Fishdiv			
Wangaloa Creek	Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Birddiv			
Unnamed tributary of the Pacific Ocean a.k.a. Turnbolls Creek at H46:787366	Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Rarefish, Birddiv		<i>Significant habitat for banded kokopu.</i>	

SCHEDULE 1A: NATURAL VALUES

Taieri/Clutha Plains subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Taieri River between Outram and Henley	Psize, Psilt, Ppass, Pgravel, Psand, Weedfree, Hjuve, Trout, Salmon, Eel, Birddiv, Fishdiv, Rarefish, Gbird			
Lakes Waipori/Waihola	Psize, Ppass, Psilt, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Fishdiv, Birddiv, Birdrare, Rarefish		<i>Significant habitat:</i> Presence of variety of waterfowl and native fish, including a breeding population of fernbird and giant kokopu.	
Mary Hill Creek	Weedfree, Rarefish, Fishdiv		<i>Significant habitat</i> for giant kokopu.	
Lee Creek	Ppass, Weedfree, Hspawn(t), Hjuve(t), Eel. Hriparian and Invrare above H44:898800			
Contour Channel and other West Taieri hill streams	Ppass, Weedfree, Hspawn(t), Hjuve(t), Eel. Hriparian in upper stretches			A high degree of naturalness above 900 metres asl
Mill Creek	Weedfree, Eel, Rarefish		<i>Significant habitat</i> for koaro.	
Meggat Burn	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Eel, Rarefish. Invrare upstream of H45:743693		<i>Significant habitat</i> for banded kokopu.	
Waipori River	Ppass in lower stretches. Hspawn(t), Hjuve(t), Hriparian, Weedfree, Fishdiv, Eel, Rarefish, Trout		<i>Significant habitat</i> for koaro upstream of dam.	A high degree of naturalness above 900 metres asl and within Scenic Reserve.
Shepherd Stream	Weedfree, Rarefish		<i>Significant habitat</i> for Lower Taieri galaxiid.	
Tributaries of Waipori River	Weedfree, Rarefish		<i>Significant habitat</i> for dusky galaxiid and koaro. Munro's Dam Stream type locality for dusky galaxiid.	
Lake Mahinerangi	Weedfree, Hriparian, Trout, Rarefish		<i>Significant habitat</i> for koaro.	
Unnamed tributaries of Lake Mahinerangi at H44:709803, H44:714801, and H44:724797	Weedfree, Rarefish		<i>Significant habitat</i> for koaro.	

SCHEDULE 1A: NATURAL VALUES

Taieri/Clutha Plains subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Lammerlaw Stream	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
North West Stream	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Nardoo Stream	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Unnamed tributary of Lake Mahinerangi at H44:705754	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Unnamed tributary of Lake Mahinerangi at H44:720766	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Unnamed tributary of Pioneer Stream at H44:703752	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Boundary Creek	Hriparian, Hspawn, Hjuve			
Unnamed tributaries of Lake Mahinerangi at H44:775772, H44:778770, and H44:775770	Weedfree, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Verter Burn	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Post Office Creek	Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish, Fishdiv		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Silver Stream	Pgravel, Weedfree, Trout, Eel. Hspawn(t), Hjuve(t), Invdiv (midreaches), Hriparian in upper catchment. Invrare upstream of I44:144849. Rarefish		<i>Significant habitat for koaro upstream of I44:114899 and including several tributaries. Significant habitat for lamprey (uncommon in Otago).</i>	A high degree of naturalness above 900 metres asl and within Scenic Reserve and water reserve.
Whare Creek	Weedfree, Eel, Rarefish		<i>Significant habitat for Lower Taieri galaxiid.</i>	
Upper Tokomairiro River main stem (including East and West Branches)	Psize, Ppass, Pgravel, Hspawn(t), Hjuve(t), Trout, Eel, Rarefish. Hriparian in upper catchment		<i>Significant habitat for fernbird. Significant habitat for Lower Taieri galaxiid in tributaries. Significant habitat for lamprey (in East and West Branches).</i>	

SCHEDULE 1A: NATURAL VALUES

Taieri/Clutha Plains subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Unnamed tributary of Fishers Stream at H45:706645	Weedfree, Rarefish		Significant habitat for Lower Taieri galaxiid.	
Unnamed tributary of the Tokomairiro River West Branch at H45:693655	Weedfree, Rarefish		Significant habitat for Lower Taieri galaxiid.	
Unnamed tributary of the Tokomairiro River West Branch a.k.a. Nuggety Gully	Weedfree, Rarefish		Significant habitat for roundhead galaxiid.	
Lovells Stream	Ppass, Hspawn(t), Hjuve(t), Trout, Eel			
Lake Tuakitoto	Ppass, Psilt, Psand, Pplant, Psize, Weedfree, Hspawn, Hjuve(t), Hriparian, Trout, Eel, Birddiv, Birdrare, Rarefish, Fishdiv		Significant habitat for giant kokopu. Also a breeding population of fernbird.	
Lake Kaitangata (and Lake Kaitangata/Lake Tuakitoto Drainage)	Weedfree, Eel, Rarefish, Fishdiv		Significant habitat for giant kokopu.	
Saddle Stream	Weedfree, Eel, Rarefish, Fishdiv		Significant habitat for giant kokopu.	
McCrosties Drain	Weedfree, Eel, Rarefish, Fishdiv		Significant habitat for giant kokopu.	
Clutha River /Mata-Au between Balclutha and the sea	Psize, Ppass, Psand, Pgravel, Hspawn(s), Hjuve(t&s), Trout, Eel, Salmon, Fishdiv, Rarefish, Gbird			
Puerua River	Ppass, Psilt, Weedfree, Rarefish, Fishdiv, Hriparian, Hspawn(t), Hjuve(t), Eel		Significant habitat for giant kokopu (Puerua River deviation)	
Glenomaru Stream	Weedfree, Hriparian, Hspawn(t), Hjuve(t). Invdiv in mid reaches			

SCHEDULE 1A: NATURAL VALUES

Southwest Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Pomahaka River	Psize, Ppass, Pgravel, Psand, Prock, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian, Rtrout, Eel, Fishdiv, Invdiv. Invrare between G45416466 and confluence with Clutha River/Mata-Au, Gbird			
Timber Creek	Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Trout. Invrare upstream of G43:173032			
Unnamed tributary of Flodden Creek a.k.a. Whisky Gully	Weedfree. Invrare upstream of G45:216674			
Rankle Burn	Weedfree. Invrare upstream of G45:274640			
Back Stream West Branch	Weedfree, Invdiv			
Bullock Creek	Weedfree. Invrare upstream of G43:170093			
Waiwera River	Pgravel, Ppass, Weedfree, Hspawn(t&s), Hriparian, Hjuve(t&s), Trout, Eel, Rarefish, Invdiv		<i>Significant habitat for roundhead galaxiid.</i>	
Kaihiku Stream	Pgravel, Hspawn(t), Hjuve(t), Eel, Trout, Invdiv (mid reaches)			
Clutha River /Mata-Au between Island Block and Balclutha	Psize, Ppass, Psand, Pgravel, Hspawn(t&s), Hjuve, Eel, Trout, Salmon, Sigveg, Birddiv, Rarefish, Fishdiv, Gbird between Balclutha and Tuapeka River mouth	Beaumont and Rongahere Gorge.	<i>Significant habitat:</i> Remnant indigenous ecosystem at Birch Island. <i>Significant vegetation:</i> Rare association of aquatic plants above confluence with Tuapeka.	

SCHEDULE 1A: NATURAL VALUES

Southwest Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Unnamed tributary of the Clutha River/Mata-Au a.k.a. Raes Junction Stream	Rarefish		<i>Significant habitat for koaro.</i>	
Canadian Creek	Rarefish		<i>Significant habitat for koaro. Significant habitat for lamprey (uncommon in Otago).</i>	
Unnamed tributary of the Tuapeka River a.k.a. Konini Creek	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Waitahuna River	Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Rarefish, Eel, Trout. Invrare upstream of H44:653760		<i>Significant habitat for Waitahuna dusky galaxiid (in headwaters and upper tributaries), and flathead galaxiid.</i>	
Tuapeka River	Pgravel, Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Eel, Trout. In divid in upper reaches			
Unnamed tributaries of the Tuapeka River upstream of G45:472668	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid and dusky galaxiid.</i>	
Wetherston Creek	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Corkscrew Road Stream	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Blackcleugh Burn	Weedfree. Invrare upstream of G45:340676			
Kuriwao Stream	Ppass, Hspawn(t), Hjuve(t), Trout, Eel			

SCHEDULE 1A: NATURAL VALUES

Southwest Otago subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Mokoreta River (upper stretches, within Otago region)	Ppass, Hspawn(t), Hjuve(t), Trout, Eel			
Waipahi River (lower stretches, within Otago region)	Pplant, Pgravel, Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Rtrout, Eel			

SCHEDULE 1A: NATURAL VALUES

Catlins subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Catchments between Fleming River and Longbeach Creek (excl Tautuku River)	Weedfree, Ppass, Hspawn, Hjuve, Hriparian, Fishdiv, Birddiv			A high degree of naturalness within bushed catchments.
Tautuku River	Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Fishdiv, Birddiv, Eel	Scenic values with silver beech margins, from its mouth to its source.		A high degree of naturalness within bushed catchments.
Tautuku Bay Stream	Weedfree, Rarefish		<i>Significant habitat for banded kokopu.</i>	
Tahakopa River	Pgravel, Psize, Weedfree, Rarefish, Ppass, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Fishdiv, Birddiv		<i>Significant habitat for flathead galaxiid. Significant habitat for lamprey (uncommon in Otago).</i>	A high degree of naturalness within bushed catchments.
Jumbo Creek	Rarefish		<i>Significant habitat for koaro and banded kokopu.</i>	
Gorge Creek	Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Unnamed tributary of the Tahakopa River at G47:268063	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Maclennan River	Psize, Weedfree, Ppass, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Fishdiv, Birddiv, Rarefish	Scenic values with silver beech margins, from confluence with Tahakopa River to its source.	<i>Significant habitat for koaro. Significant habitat for lamprey (uncommon in Otago).</i>	A high degree of naturalness within bushed catchments.
Waitangi Stream	Weedfree, Rarefish		<i>Significant habitat for koaro.</i>	
Matai Stream	Weedfree, Rarefish, Fishdiv		<i>Significant habitat for roundhead galaxiid and banded kokopu.</i>	
Catlins River	Psize, Pgravel, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Rarefish, Fishdiv, Invdiv	Scenic values with silver beech margins, from its mouth to its source.	<i>Significant habitat for giant kokopu, banded kokopu and roundhead galaxiid. Significant habitat for lamprey (uncommon in Otago).</i>	A high degree of naturalness within bushed catchments.
Purakaunui River	Pboulder, Ppass (below Falls), Weedfree, Eel	Purakaunui Falls.		A high degree of naturalness within bush, apart from viewing structures.

SCHEDULE 1A: NATURAL VALUES

Catlins subregion				
<i>Water body</i>	<i>Ecosystem Values</i>	<i>Outstanding natural feature or landscape</i>	<i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>	<i>Areas with a high degree of naturalness</i>
Frank Stream	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Wallis Stream	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Craggy Tor Stream	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Daphne Brook	Weedfree, Rarefish		<i>Significant habitat for flathead galaxiid.</i>	
Tarwood Stream	Weedfree		<i>Significant habitat for roundhead galaxiid.</i>	
Papatupu Stream	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
Unnamed tributary of the Catlins River at G46:274228	Weedfree, Rarefish		<i>Significant habitat for roundhead galaxiid.</i>	
McLaren Creek	Weedfree, Rarefish, Fishdiv		<i>Significant habitat for giant kokopu, koaro, roundhead galaxiid and banded kokopu.</i>	
Owaka River	Psize, Pgravel, Ppass, Weedfree, Hriparian, Hspawn(t), Hjuve(t), Fishdiv, Trout, Eel. Invdiv in upper reaches			A high degree of naturalness within bushed catchments.
Unnamed tributary of the Owaka River at H46:504119	Weedfree, Rarefish, Fishdiv		<i>Significant habitat for giant kokopu.</i>	
Waipati (Chaslands) River	Hspawn(t), Hjuve(t), Trout, Eel			

SCHEDULE 1A: NATURAL VALUES

Sources for information contained in Schedule 1A

The outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna identified in this schedule are derived from the following publications:

Allibone, R.M. (1997) Freshwater Fish of the Otago Region. Department of Conservation. Otago Conservancy Miscellaneous Report Series No. 36. (includes NIWA Freshwater Fish database for Otago rivers).

Biggs, BJ and Shand, BI (1985) Biological Communities and the Potential Effects of Power Developments in the Lower Clutha River - Otago. Report no. WS987, Ministry of Works and Development.

Clayton, J. (1993) Resource Evaluation and Operational Programme For Lakeweed: The Upper Clutha and Kawarau Catchment Areas. Prepared by NIWA Ecosystems for the Otago Regional Council.

Department of Conservation: Special Sites of Wildlife Interest.

Grindell, D.S. and P.A. Guest (eds) (1986) A list of Rivers and Lakes Deserving Inclusion in a Schedule of Protected Waters. Water and Soil Miscellaneous Publication, No. 97. National Water and Soil Conservation Authority, Wellington.

Grindell, D.S. (1984) A National Inventory of Wild and Scenic Rivers. Water and Soil Miscellaneous Publication, No. 68. National Water and Soil Conservation Authority, Wellington.

Kenny, J.A. and B.W. Hayward (eds) (1993) Inventory of Important Geological Sites and Landforms in the Otago region. Geological Society of New Zealand Miscellaneous Publication No. 77. Geological Society of New Zealand, Lower Hutt.

Lake Wanaka Preservation Act 1973.

Local Water Conservation (Lake Tuakitoto) Notice 1991.

Ministry for the Environment (1997) Water Conservation (Kawarau) Order 1997.

Water and Soil Conservation Authority (1982) A Draft for a National Inventory of Wild and Scenic Rivers. Part 1 - Nationally Important Rivers. Water and

SCHEDULE 1A: NATURAL VALUES

Soil Miscellaneous Publication, No. 97. National Water and Soil Conservation Authority, Wellington.

SCHEDULE 1AA: OTAGO RESIDENT NATIVE
FRESHWATER FISH THREAT STATUS

1AA Schedule of Otago Resident Native Freshwater Fish - Threat Status

Common name	Scientific name	Threat Status
Lowland longjaw galaxias	<i>Galaxias cobitinis</i>	Nationally Critical*
Canterbury mudfish (Kōwaro)	<i>Neochanna burrowsius</i>	Nationally Critical
Teviot flathead galaxias	<i>Galaxias</i> 'Teviot'	Nationally Critical*
Dusky galaxias	<i>Galaxias pullus</i>	Nationally Endangered*
Alpine galaxias	<i>Galaxias</i> aff. <i>paucispondylus</i> 'Manuherikia'	Nationally Endangered*
Eldon's galaxias	<i>Galaxias eldoni</i>	Nationally Endangered*
Central Otago roundhead galaxias	<i>Galaxias anomalus</i>	Nationally Vulnerable*
Clutha flathead galaxias	<i>Galaxias</i> sp. D.	Nationally Vulnerable*
Smeagol galaxias	<i>Galaxias</i> aff. <i>gollumoides</i> 'Nevis'	Nationally Vulnerable*
Longfin eel (tuna)	<i>Anguilla dieffenbachii</i>	Declining
Giant kokopu (Taiwharu)	<i>Galaxias argenteus</i>	Declining
<i>Galaxias gollumoides</i>	<i>Galaxias gollumoides</i>	Declining
Lamprey (kanakana)	<i>Geotria australis</i>	Declining
Torrentfish (Piripiripōhatu)	<i>Cheimarrichthys fosteri</i>	Declining
Koaro	<i>Galaxias brevipinnis</i>	Declining
Inanga (inaka)	<i>Galaxias maculatus</i>	Declining
Bluegill bully	<i>Gobiomorphus hubbsi</i>	Declining
Redfin bully	<i>Gobiomorphus huttoni</i>	Declining

*NB: Fish marked with an * are only found in the Otago Region.

1B Schedule of water supply values

This schedule identifies existing water takes from lakes and rivers, where the water taken is used for public water supply purposes. The communities identified in the schedule have come to rely upon these water supplies to provide for their social, economic and cultural well being. Rule 12.1.3.1 provides for replacement consents for these takes as a controlled activity, to provide certainty for these communities. The water takes are identified by geographic subregion and by individual water bodies within each subregion (see Maps A1–A8 for subregions and site locations).

Water is also taken for private water supply throughout Otago, particularly for domestic supply to dwellings such as farm homesteads and associated buildings, usually without treatment. It is also consumed without treatment by musterers, anglers, trampers, cyclists, hunters and other backcountry users. Areas with a high degree of naturalness, identified in Schedule 1A, will often contain water bodies with relatively pristine water quality. Those that utilise the water without treating it take the risk that it may contain giardia or other pathogenic (disease causing) organisms.

North Otago subregion

Water body or Catchment	Site No.	Water Supply Values
Kakanui River (note, the shallow aquifer forms an integral part of the water body)	1	Windsor and Dunrobin Water Supplies at J41:325737
	2	Weston and Enfield Water Supplies at J41:381667
	3	Reidston Water Supply at J42:405595
	4	Kakanui Water Supply at J42:430581
Kauru River	5	Kauru Hill Water Supply at J41:314637
Kurinui Creek a.k.a. Big Kuri Creek	6	Hampden-Moeraki Water Supply at J42:364413
Shag River (Waihemo) (note, the shallow aquifer forms an integral part of the water body)	7	Dunback Water Supply at I43:274279
	8	Palmerston (including Blue Mountain) Water Supply at J43:317237
	9	Goodwood Water Supply at J43:343234
Waianakarua River	10	Herbert-Waianakarua Water Supply at J42:339507

Maniototo subregion

Water body or Catchment	Site No.	Water Supply Values
Sow Burn	11	Patearoa Water Supply at H42:786435
Ewe Burn	12	Ranfurly Water Supply at H41:800689, H41:836770 and H41:794684

Central Otago subregion

Water body or Catchment	Site No.	Water Supply Values
Clutha River/Mata-Au <i>between Alexandra and Lake</i>	13	Clyde Water Supply at G42:199521
	14	Cromwell Water Supply at G41:120670

SCHEDULE 1B: WATER SUPPLY VALUES

Water body or Catchment	Site No.	Water Supply Values
<i>Wanaka (including Lake Dunstan)</i>		
Manuherikia River catchment	15	St Bathans Water Supply at H40:592926 and H40:602938
	16	Omakau and Ophir Water Supplies at G41:427626

Lakes subregion

Water body or Catchment	Site No.	Water Supply Values
Lake Wakatipu	17	Queenstown Water Supply from E41:666653 and F41:719664
Lake Hayes Tributary	18	Lake Hayes Water Supply at F41:794738
Lake Wanaka	19	Wanaka Water Supply at F40:033062 and F40:013057
Lake Hawea	20	Hawea Water Supply at G40:123153

Roxburgh subregion

Water body or Catchment	Site No.	Water Supply Values
Clutha River/Mata-Au <i>between Alexandra and Island Block</i>	21	Roxburgh Hydro Village Water Supply at G43:225194
Benger Burn	22	Etrick Water Supply at G43:198030

Waikouaiti/Lammermoor subregion

Water body or Catchment	Site No.	Water Supply Values
Deep Stream	23	Dunedin Water Supply at H44:677992
Deep Creek	24	Dunedin Water Supply at H43:665037
Fortification Creek Dam	25	Hindon Water Supply at I44:906923
Waikouaiti River	26	Waikouaiti Water Supply at I43:232079
Waikouaiti River	27	Mt Pleasant-Stoneburn Water Supply at I43:155263

Coastal subregion

Water body or Catchment	Site No.	Water Supply Values
Water of Leith	28	Dunedin Water Supply at I44:152820 (Ross Creek)
	29	I44:153833 (Nicols Creek);
	30	I44:160843 (Lower Morrisons Creek)
	31	I44:153849 (Upper Morrisons Creek); and
	32	I44:164857 (West Branch)
Sullivans Dam	33	Dunedin Water Supply at I44:172863
Rossville Reservoir	34	Port Chalmers Water Supply at I44:233865 (Rossville intake); and
	35	I44:227879 (Cedar Farm intake)

SCHEDULE 1B: WATER SUPPLY VALUES

Waitati River	36	Dunedin Water Supply at I44:158883 (Burns Creek); I44:160873 (Jeffersons Creek); and I44:159870 (Williams Creek)
	37	
	38	
Wetherstons Creek	39	Waitati Water Supply at I44:201882

Taieri/Clutha Plains subregion

Water body or Catchment	Site No.	Water Supply Values
Taieri River <i>between Outram and Henley</i>	40	Outram Water Supply at I44:955804
Mill Creek	41	West Taieri Water Supply at H44:833730
Meggat Burn	42	North Bruce Water Supply at H45:743693
Silver Stream catchment	43	Dunedin Water Supply at I44:096859; I44:105844; I44:105848; and I44:105850
	44	
	45	
	46	
Tokomairiro River East Branch	47	Milton Water Supply at H45:746529
Clutha River/Mata-Au <i>between Balclutha and the sea</i>	48	Bruce Water Supply at H46:619343 Kaitangata and Wangaloa Water Supplies at H46:667308
	49	
Puerua River	50	Richardson Water Supply at H46:510257

Southwest Otago subregion

Water body or Catchment	Site No.	Water Supply Values
Pomahaka River	51	Glenkenich Water Supply at G44:103754 <i>[Repealed – 1 June 2015]</i>
	52	
Waipahi River	63	Waipahi Rural Stock Water Supply at G45:196488
Timber Creek	53	Moa Flat Water Supply at G43:172033
Greens Creek	54	Rural Water Supply at G44:104752
Unnamed tributary of Flodden Creek a.k.a. Whisky Gully	55	Tapanui Water Supply at G45:223660
Back Stream West Branch	56	<i>[Repealed – 1 June 2015]</i>
Clutha River/Mata-Au <i>between Island Block and Balclutha</i>	57	Richardson Water Supply at G45:491435 Balclutha Water Supply at H46:580363
	58	
Waitahuna River	59	Balmoral 1 and 2 and Tuapeka East Water Supplies at H45:523564
Bungtown Creek	60	Lawrence Water Supply at H44:573773
Tuapeka River	61	Tuapeka Water Supply at G44:491742
Bluejacket Gully	62	Lawrence Water Supply at H44:543747

1C Schedule of registered historic places

This schedule identifies registered historic places which occur in, on, under or over the beds or margins of Otago's lakes and rivers. Historic places are an important cultural resource as they provide links with Otago's history and heritage.

There are other sites, buildings, places and areas of heritage value on the beds or margins of Otago rivers or lakes that are not identified in this schedule. The New Zealand Historic Places Trust retains information about important but unregistered historic values.

The registered historic places are identified by geographic subregion and by individual water bodies within each subregion (see Maps A1–A8 for subregions).

North Otago subregion

Water body	Registered Historic Places
Oamaru Creek	Japanese Red Bridge, Oamaru Public Gardens Thames Street Bridge, Thames Street, Oamaru
Kakanui River	Clarks Flourmill, including dam, gate and race, SH 1, Maheno
McCormicks Creek	McCormick's Creek Bridge, SH 85, Dunback
Waianakarua River North Branch	Graves Dam, Breakneck Road, Waianakarua Turnbull Thompson Bridge, SH 1, Waianakarua
Waianakarua River South Branch	Waianakarua Bridge, SH 1, Waianakarua

Maniototo subregion

Water body	Registered Historic Place
Hog Burn	Naseby Historic Area, Naseby – various culverts and crossings in or over the river

Central Otago subregion

Water body	Registered Historic Places
Clutha River/Mata-Au <i>between Alexandra and Lake Wanaka</i>	Bridge Piers, SH8, Alexandra Earnsclough Bridge and Piers, Clyde
Manuherikia River	Shakey Bridge, Alexandra Daniel O'Connell Bridge, Ophir Bridge Road–, Ophir
Lake Dunstan	Old Bannockburn Bridge Foundations (submerged). Cromwell Bridge, Cromwell

SCHEDULE 1C: REGISTERED HISTORIC PLACES

Lakes subregion

Water body	Registered Historic Places
Kawarau River	Kawarau Falls bridge and dam, Frankton, Queenstown Kawarau Gorge Suspension Bridge, SH 6, Gibbston
Luggate Creek	Luggate Flourmill, Luggate
Horne Creek	Horne Creek Bridge, Ballarat Street, Queenstown
Shotover River	Oxenbridge Tunnel, Arthurs Point, Queenstown Edith Cavell Bridge, Arthurs Point, Queenstown
Mill Creek	Wakatipu Flourmill Complex, Speargrass Flat Road. Butel's Flourmill, Millbrook
Murdochs Creek	Bullendale Battery and Dynamo, Skippers catchment
Stony Creek	"Murphy's Creek" suspended pipe over Stony Creek, Skippers catchment

Roxburgh subregion

Water body	Registered Historic Places
Clutha River/Mata-Au <i>between Alexandra and Island Block</i>	Four Span Steel Truss Bridge, Millers Flat Old bridge piers at Roxburgh, adjacent to current bridge

Strath Taieri subregion

Water body	Registered Historic Place
Taieri River <i>between Tiroiti and Pukerangi</i>	Hyde Bridge, SH 87, Hyde

Coastal subregion

Water body	Registered Historic Places
Water of Leith	George Street Bridge, George Street, Dunedin Cast Iron Footbridge, University of Otago, Dunedin Stone Bridge, University of Otago, Dunedin
Ross Creek	Earth Dam, Burma Road, Dunedin Valve Tower and Jetty, Burma Road, Dunedin

Taieri/Clutha Plains subregion

Water body	Registered Historic Places
Clutha River Mata-Au <i>between Balclutha and the sea</i>	Blair Railway Bridge, SH 91, Balclutha Balclutha Bridge, SH 1, Balclutha
Pioneer Stream and Reef Creek	Otago Pioneer Quartz Historic Reserve containing many relics of former mining activity

1D Schedule of spiritual and cultural beliefs, values and uses of significance to Kai Tahu

This schedule identifies the spiritual or cultural beliefs, values or uses associated with water bodies of significance to Kai Tahu. The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1–A8 for subregions). Note that the codes for these values are given in Table 4. Kai Tahu provided the information that appears in this schedule.

Where an activity will require a resource consent, Policy 5.4.2 will apply. This means that where an activity is to occur with respect to any water body for which this schedule identifies a particular spiritual or cultural belief, value or use, it may be necessary for the applicant to consult with Kai Tahu in a manner which is consistent with that set out in the document “Kai Tahu Ki Otago - Natural Resource Management Plan”.

Table 4: Code for Kai Tahu beliefs, values and uses ascribed to water bodies

Code	Mana Interests:
MA1	Kaitiakitanga – the exercise of guardianship by Kai Tahu in accordance with tikanga Maori* in relation to Otago’s natural and physical resources; and includes the ethic of stewardship.
MA2	Mauri – life force; for example the mauri of a river is most recognisable when there is abundance of water flow and the associated ecosystems are healthy and plentiful; a most important element in the relationship that Kai Tahu have with the water bodies of Otago.
MA3	Waahi tapu and/or Waiwhakaheke – sacred places; sites, areas and values associated with water bodies that hold spiritual values of importance to Kai Tahu. (Note: Kai Tahu should be consulted regarding the location of these places, sites areas and values for a river identified as MA3).
MA4	Waahi taoka – treasured resource; values, sites and resources that are valued and reinforce the special relationship Kai Tahu have with Otago’s water resources.

Code	Access/Customary Use Interests:
MB1	Mahika kai – places where food is procured or produced. Examples in the case of waterborne mahika kai include eels, whitebait, kanakana (lamprey), kokopu (galaxiid species), koura (fresh water crayfish), fresh water mussels, indigenous waterfowl, watercress and raupo.
MB2	Kohanga – important nursery/spawning areas for native fisheries and/or breeding grounds for birds.
MB3	Trails – sites and water bodies which formed part of traditional routes, including tauraka waka (landing place for canoes).
MB4	Cultural materials – water bodies that are sources of traditional weaving materials (such as raupo and paru) and rongoa (medicines).
MB5	Waipuna – sources of water highly regarded for their purity, healing and health-giving powers.

* the correct way of doing things, according to custom.

SCHEDULE 1D: KAI TAHU VALUES

North Otago subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Awamoko Stream			✓	✓	✓		✓	✓	
Landon Creek				✓					
Awamoa Creek				✓				✓	
Waiareka Creek				✓	✓		✓	✓	
Kakanui River	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oamaru Creek				✓	✓			✓	
Kakaho Creek				✓				✓	
Kurinui Creek a.k.a. Big Kuri Creek				✓			✓	✓	
Ngutukaka Creek				✓					
Waiherowhero Creek				✓					
Waimataitai				✓	✓			✓	
Creeks between Waimataitai & Shag Point/Matakaea				✓					
Stony Creek				✓	✓	✓			
Bobbys Head Creek			✓	✓					
Most creeks between Bobbys Head & Pleasant River				✓					
Shag River (Waihemo)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Waianakarua River	✓	✓		✓	✓	✓	✓	✓	✓
Pleasant River			✓	✓	✓	✓	✓	✓	
Trotters Creek	✓	✓		✓	✓	✓	✓	✓	✓

Maniototo subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Taieri River, upstream of Tiroiti	✓	✓	✓	✓	✓	✓	✓	✓	
Streams on the west-facing slopes of the Rock and Pillar Range, excluding Logan Burn				✓	✓				
Kye Burn	✓	✓	✓	✓	✓	✓	✓	✓	

Central Otago subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Clutha River/Mata-Au between Alexandra and Lake Wanaka	✓	✓	✓	✓	✓	✓	✓	✓	
Manuherikia River	✓	✓	✓	✓	✓	✓	✓	✓	
Moa Creek				✓					
Other Manuherikia tributaries	✓	✓	✓	✓	✓	✓	✓	✓	
Little Bremner Creek				✓					
Earnsleugh or Fraser River				✓					
Bannock Burn				✓					
Lindis River				✓			✓	✓	
Cardrona River	✓	✓	✓	✓	✓	✓	✓	✓	

SCHEDULE 1D: KAI TAHU VALUES

Lakes subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Kawarau River <i>between Lakes Dunstan and Wakatipu</i>	✓	✓		✓			✓	✓	
Lake Hayes				✓	✓				
Lake Wakatipu	✓	✓	✓	✓	✓	✓	✓	✓	
Diamond Lake, Diamond Creek and Lake Reid				✓					
Dart River/Te Awa Whakatipu	✓	✓	✓	✓	✓	✓	✓	✓	
Route Burn	✓	✓	✓	✓	✓	✓	✓	✓	
Greenstone River, Caples River	✓	✓	✓	✓	✓	✓	✓	✓	
Lochy River				✓					
Streams flowing to Lake Wakatipu between Halfway Bay and Elfin Bay, including Von River				✓					
Lake Wanaka	✓	✓	✓	✓	✓	✓	✓	✓	
Matukituki River	✓	✓	✓	✓	✓	✓	✓	✓	
Streams flowing off West Wanaka, including Albert Burn				✓	✓				
Makarora River	✓	✓		✓	✓	✓	✓	✓	
Lake Hawea	✓	✓	✓	✓	✓	✓	✓	✓	
Hunter River	✓	✓	✓	✓	✓	✓	✓	✓	
Dingle Burn				✓					
Timaru River				✓					
Hawea River	✓	✓		✓	✓	✓	✓	✓	
Shotover River	✓	✓		✓	✓	✓	✓	✓	
Arrow River	✓	✓		✓	✓	✓	✓	✓	
Roaring Meg	✓	✓	✓	✓			✓		
Nevis River	✓	✓	✓	✓			✓		

Roxburgh subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Clutha River/Mata-Au <i>between Alexandra and Island Block</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Teviot River					✓				
Lake Onslow				✓	✓				
Minzion Burn				✓					

Strath Taieri subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Great Moss Swamp				✓	✓				
Red Swamp Creek				✓					
Taieri River <i>between Tiroiti and Pukerangi</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Nenthorn Stream	✓	✓	✓	✓	✓	✓	✓	✓	
Deighton Creek				✓					

SCHEDULE 1D: KAI TAHU VALUES

Streams flowing on west side of Taieri Ridge				✓					
Lug Creek, Wandle Creek and other streams flowing on the east side of the Rock and Pillar Range				✓					

Waikouaiti/Lammermoor subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Taieri River <i>between Pukerangi and Outram</i>	✓	✓	✓	✓	✓	✓		✓	
Three O'clock Stream				✓					
Lee Stream	✓	✓	✓	✓	✓	✓	✓	✓	
Ross Stream				✓					
Deep Stream (and Deep Creek)	✓	✓	✓	✓	✓	✓		✓	
Waikouaiti River (excluding South Branch)	✓	✓	✓	✓	✓	✓	✓	✓	
Waikouaiti River South Branch	✓	✓		✓	✓	✓	✓	✓	
Lower Waikouaiti River (estuary and tidal zone)			✓	✓	✓	✓	✓	✓	
Hawksbury Lagoon			✓	✓	✓	✓		✓	
Streams between Karitane & Yellow Bluff (Te Pa Hawea)				✓					

Coastal subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Streams between Summer Hill and Brighton, excluding Taieri and Tokomairiro River main stems			✓	✓					
Akatore River			✓	✓	✓	✓	✓	✓	
Lower Tokomairiro River main stem	✓	✓	✓	✓	✓	✓	✓	✓	
Taieri River <i>between Henley and the sea</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Unnamed tributary of the Taieri River a.k.a. Takitakitōa Stream	✓	✓		✓	✓	✓		✓	
Otokia Creek	✓	✓	✓	✓	✓	✓	✓	✓	
Deep Creek (Omimi)				✓			✓		
Evansdale Creek				✓					
Kaikorai Stream	✓	✓	✓	✓	✓	✓	✓	✓	
Otago Peninsula streams	✓	✓	✓	✓	✓	✓		✓	✓
Water of Leith			✓	✓					
Waitati River				✓					

SCHEDULE 1D: KAI TAHU VALUES

Taieri/Clutha Plains subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Taieri River <i>between Outram and Henley</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Lakes Waipori and Waihola, Sinclair Wetlands	✓	✓	✓	✓	✓	✓	✓	✓	✓
Contour Channel and other West Taieri hill streams					✓				
Waipori River				✓	✓				
Silver Stream	✓	✓	✓	✓	✓	✓	✓		
Owhiro Stream	✓	✓		✓	✓	✓	✓	✓	
Upper Tokomairiro River main stem					✓				
Lovells Stream					✓				
Lake Tuakitoto	✓	✓		✓	✓	✓	✓	✓	
Clutha River/Mata-Au <i>between Balclutha and the sea</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Waitepeka River, Puerua River including Glenomaru Stream tributary				✓	✓	✓	✓		

Southwest Otago subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Pomahaka River	✓	✓	✓	✓	✓	✓	✓	✓	
Waiwera River					✓				
Clutha River/Mata-Au <i>between Island Block and Balclutha</i>	✓	✓	✓	✓	✓	✓	✓	✓	
Waitahuna River					✓				
Waipahi River (lower stretches within Otago region)	✓	✓	✓	✓	✓	✓	✓	✓	

Catlins subregion									
Water body	MA1	MA2	MA3	MA4	MB1	MB2	MB3	MB4	MB5
Catchments between Fleming River and Longbeach Creek (excluding Tautuku River)			✓	✓	✓				
Tautuku River			✓	✓					
Tahakopa River	✓	✓	✓	✓	✓	✓	✓	✓	
Maclennan River	✓	✓		✓	✓	✓	✓	✓	
Catlins River	✓	✓		✓	✓	✓	✓	✓	
Owaka River	✓	✓		✓	✓	✓	✓	✓	
Karoro Creek			✓	✓	✓				

2. Schedule of specified restrictions on the exercise of permits to take surface water

This schedule provides specified minimum flows applying to the taking of surface water within primary and supplementary allocation from catchments identified in the B-series maps, and Welcome Creek. The schedule should be read in conjunction with the policies contained in section 6.4.

Schedule 2A specifies minimum flows that apply to the primary allocation water taken from catchments identified in the B-series maps. The last column of Schedule 2A also specifies the primary allocation limit in accordance with Policy 6.4.2(a) for the whole catchments of the rivers and lakes. The catchment areas for the primary allocation limits set by Policy 6.4.2(a) may be larger than those specified on the B-series maps.

Schedule 2B specifies minimum flows that apply to specified blocks of supplementary allocation for some catchments. Additional supplementary allocation may be granted under Policies 6.4.9 and 6.4.10.

Schedule 2 identifies minimum flows in litres per second and the site at which flows will be monitored. When the minimum flow is reached, consents to take water from the identified catchment will cease or will be suspended by the Otago Regional Council, in accordance with Policy 6.4.11 of this Plan. The flows listed in Schedule 2, which trigger suspension, use the instantaneous flow rates.

In accordance with Policy 6.4.1A, groundwater takes from aquifers listed in Schedule 2C and identified in the C-series maps, and other connected groundwater, are considered against primary or supplementary allocation provided for by Policies 6.4.2 and 6.4.9 and where listed in Schedules 2A and 2B, and may be subject to the minimum flows identified.

Schedule 2D identifies matters to be considered when making additions to these schedules through a plan change.

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE WATER

2A Schedule of specific minimum flows for primary allocation takes in accordance with Policy 6.4.3, and primary allocation limits in accordance with Policies 6.4.2(a) and 6.4.1A

The following schedule:

1. Identifies the minimum flows that apply to the taking of surface water, which includes groundwater managed as surface water in terms of Policy 6.4.1A within primary allocation from the catchments shown in the B-series maps, Welcome Creek and aquifers shown in the C-series maps. The B-series maps identify the location of catchment area boundaries and numbered monitoring sites referred to in the schedule for setting and measuring the minimum flows.
2. Specifies the primary allocation limit in accordance with Policy 6.4.2(a). That limit is exceeded in catchments where the consented takes as at 28 February 1998 (or 19 February 2005 in the Welcome Creek catchment, or 7 July 2000 in the Waianakarua catchment) set a higher limit in accordance with Policy 6.4.2(b). The catchments in which the limit set by Policy 6.4.2(a) is exceeded by Policy 6.4.2(b) (as at 20 December 2008) are the Shag, Kakanui, Taieri, Lake Hayes, Luggate and Manuherikia.

Catchment See the B-series maps	Monitoring Site (with MS number) See the B-series maps	Minimum flow (litres per second – instantaneous flow)	Primary Allocation Limits in accord with Policy 6.4.2(a) (litres per second – instantaneous flow)
Welcome Creek catchment	Steward Road	600	600 <i>Welcome Creek catchment from confluence with Waitaki River to headwaters. (Also subject to Table 12.1.4.2)</i>
Kakanui catchment (a) 1 October to 30 April	Mill Dam (MS 3) and McCones (MS 3b)	250 (300 for secondary permits) If 250 breached, flow must return to 400 before taking can recommence.	750 <i>Kakanui catchment from mouth to headwaters excluding the Waiareka Creek and Island Stream catchments.</i>
(b) 1 May to 30 September	Clifton Falls (MS 3a) Mill Dam (MS 3) and McCones (MS 3b)	400 for primary and secondary permits	
Waianakarua catchment	Browns Pump (MS 13)	200 (1 October to 30 April) 400 (1 May to 30 September)	190 <i>Waianakarua catchment from mouth to headwaters</i>
Trotters catchment	Mathesons Weir (MS 12)	10 (1 October to 30 April) 35 (1 May to 30 September)	15 <i>Trotters catchment from mouth to headwaters</i>

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE WATER

Catchment See the B-series maps	Monitoring Site (with MS number) See the B-series maps	Minimum flow (litres per second – instantaneous flow)	Primary Allocation Limits in accord with Policy 6.4.2(a) (litres per second – instantaneous flow)
Shag catchment (both minimum flows apply)	Goodwood Pump (MS 1)	28	280 <i>Shag catchment from mouth to headwaters</i>
	Craig Road (MS 2)	150	
Water of Leith catchment	Water of Leith at University Footbridge (MS 4)	94	140 <i>Water of Leith catchment from mouth to headwaters</i>
Taieri River upstream of Paerau	Paerau Dam (MS 5a)	850	4,860 <i>Taieri River catchment from mouth to headwaters.</i>
Taieri River catchment between Paerau and Waipiata	Taieri River at Waipiata (MS 5)	1,000	
Taieri River catchment between Waipiata and Tiroiti	Taieri River at Tiroiti (MS 5b)	1,100	
Taieri River catchment between Tiroiti and Sutton	Taieri River at Sutton (MS 6)	1,250	
Taieri River catchment between Sutton and Outram	Taieri River at Outram (MS 6a)	2,500	
Luggate catchment	SH6 Bridge (MS 11)	180 (1 November to 30 April)	500 <i>Luggate catchment from confluence with Clutha/Mata-Au to headwaters</i>
		500 (1 May to 30 October)	
Lake Hayes catchment area	Mill Creek at Fish Trap (MS 7)	180	260 <i>Lake Hayes catchment from lake outlet to headwaters</i>
Manuherikia River catchment upstream of Ophir	Manuherikia River at Ophir (MS 8)	820	3,200 <i>Manuherikia catchment from confluence with Clutha/Mata-Au to headwaters</i>
Waitahuna River catchment	Waitahuna River at Tweeds Bridge (MS 9)	450	650 <i>Waitahuna catchment from confluence with Clutha/Mata-Au to headwaters</i>
Pomahaka catchment (within Otago Region)	Burkes Ford (MS 15)	3,600 (1 October to 30 April)	1,000 <i>Pomahaka catchment from confluence with Clutha/Mata-Au to headwaters</i>
		7,000 (1 May to 30 September)	

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE WATER

Catchment See the B-series maps	Monitoring Site (with MS number) See the B-series maps	Minimum flow (litres per second – instantaneous flow)	Primary Allocation Limits in accord with Policy 6.4.2(a) (litres per second – instantaneous flow)
Waiwera catchment	Maws Farm (MS 16)	280 (1 October to 30 April) If 280 breached by taking, flow must return to 310 before taking can recommence. 400 (1 May to 30 September)	150 <i>Waiwera catchment from confluence with Clutha/Mata-Au to headwaters</i>
Lake Tuakitoto catchment	Lovells Creek at SH1 (MS 10)	5	30 <i>Lake Tuakitoto catchment from confluence with Clutha/Mata-Au to headwaters</i>

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE WATER

2B Schedule of supplementary allocation blocks and specific minimum flows in accordance with Policy 6.4.9(c)

Catchment (See the B-series maps) & Supplementary Block Number	Minimum Flow (litres per second – instantaneous flow) at the monitoring site(s) (See the B-series maps)	Supplementary Allocation Block (litres per second – instantaneous flow)
Welcome Creek catchment (first supplementary allocation block)	1,000 At Steward Road (MS 14)	400 <i>(Also subject to Table 12.1.4.2)</i>
Kakanui catchment	For each minimum flow listed below: 1. At Mill Dam (MS 3) for takes downstream of Clifton Falls monitoring site; or 2. At both Mill Dam (MS 3) and Clifton Falls (MS 3a) for takes upstream of Clifton Falls monitoring site.	
Kakanui catchment (first supplementary allocation block)	1 October to 30 April: 1,050	1 October to 30 April: 300
	1 May to 30 September: 1,500	1 May to 30 September: 500
Kakanui catchment (subsequent supplementary allocation blocks)	All subsequent minimum flows corresponding to supplementary allocation blocks in the Kakanui catchment will be based on the following formula: 1 October to 30 April: $1,050 + (300 \times \text{number of supplementary allocation block}^*)$ 1 May to 30 September: $1,500 + (500 \times \text{number of supplementary allocation block}^*)$ * 2 for the 2 nd , 3 for the 3 rd allocation block, and so on.	All subsequent supplementary allocation blocks in the Kakanui catchment will be based on the following sizes: 1 October to 30 April: 300 1 May to 30 September: 500
Waianakarua catchment (first supplementary allocation block)	311 At Browns Pump (MS 13)	100
Trotters catchment (first supplementary allocation block)	1 October to 30 April: 30 at Mathesons Weir (MS 12)	15
	1 May to 30 September: 50 at Mathesons Weir (MS 12)	15
Trotters catchment (second supplementary allocation block)	1 October to 30 April: 60 at Mathesons Weir (MS 12)	30
	1 May to 30 September: 80 at Mathesons Weir (MS 12)	30
Trotters catchment (third supplementary allocation block)	1 October to 30 April: 90 at Mathesons Weir (MS 12)	30
	1 May to 30 September: 110 at Mathesons Weir (MS 12)	30

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE WATER

Catchment (See the B-series maps) & Supplementary Block Number	Minimum Flow (litres per second – instantaneous flow) at the monitoring site(s) (See the B-series maps)	Supplementary Allocation Block (litres per second – instantaneous flow)
Shag catchment (first supplementary allocation block)	650 At Craig Road (MS 2) 401 At Goodwood Pump (MS 1)	100
Shag catchment (second supplementary allocation block)	750 At Craig Road (MS 2) 501 At Goodwood Pump (MS 1)	100
Pomahaka catchment (within Otago Region) (first supplementary allocation block)	13,000 At Burkes Ford (MS 15)	500
Waiwera catchment (first supplementary allocation block)	600 At Maws Farm (MS 16)	100

2C Schedule of aquifers where groundwater takes are to be considered as primary allocation, and subject to minimum flows of specified catchments in accordance with Policy 6.4.1A

Aquifer Name	Map Reference	Catchment to which primary or supplementary allocation limits apply, and minimum flows may apply*
Kakanui-Kauru Alluvium Aquifer	C17 & C18	Kakanui catchment*
Shag Alluvium Aquifer	C19	Shag catchment*
Lindis Alluvial Ribbon Aquifer	C5 & C6	Lindis catchment**
Cardrona Alluvial Ribbon Aquifer	C2 & C3	Cardrona catchment upstream of the Mount Barker recorder site**
Lowburn Alluvial Ribbon Aquifer	C7	Lowburn Stream**
Pomahaka Alluvial Ribbon Aquifer	C22 & C23	Pomahaka catchment**

* as given in Schedules 2A and 2B.

** as provided for by Policies 6.4.2, 6.4.3 and 6.4.9.

2D Schedule of matters to be considered when setting minimum flows and allocation limits

Primary allocation limits and minimum flows will be added to Schedule 2A, to give effect to the objectives and policies in this Plan, through the plan change process following scientific investigation and consultation with the community and affected parties. The lists in 2D.1 and 2D.2 identify matters to which consideration will be given when setting these flows and limits. The lists are not exhaustive and consideration will be given to these and any other relevant matters.

2D.1 When setting minimum flows in Schedule 2A for a catchment, consideration will be given to the following matters:

- (a) Any existing or previous minimum flow regime or residual flow;
- (b) The 7-day mean annual low flow;
- (c) Interaction among water bodies;
- (d) Ecological values, including the need for flow variability;
- (e) Demand for water, including community water supplies;
- (f) Existing water uses and associated infrastructure;
- (g) Environmental, social, cultural, recreational and economic costs and benefits of taking and using water before and after the implementation of a minimum flow regime; and
- (h) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

2D.2 When setting primary allocation limits in Schedule 2A for a catchment, consideration will be given to the following matters:

- (a) Amount of water currently allocated as primary allocation;
- (b) Amount of water currently taken as primary allocation;
- (c) Any other existing taking and using of water;
- (d) The 7-day mean annual low flow;
- (e) Proposed minimum flow regime;
- (f) Possible sources of water;
- (g) Acceptable duration and frequency of rationing among consented water users; and
- (h) Social and economic benefits of taking and using water.

Note: For catchments not included in Schedule 2A, refer to Policy 6.4.4 for determining minimum flows and Policy 6.4.2 for identification of primary allocation.

3. Schedule of human use values of Otago's aquifers

Schedule 3A identifies the uses of groundwater from particular aquifers in Otago. These aquifers are identified on the C-series maps. Schedule 3B identifies the location of groundwater takes for the purpose of community water supply. The identification of these human use values provides a mechanism for recognising the existence of values which need to be taken into account and given appropriate protection in managing the taking of water and discharge of contaminants (see Policy 9.4.1). The opportunity to provide such protection will arise when considering applications for resource consents for these activities.

Those that utilise the groundwater do take the risk that it may not be suitable for human consumption due to the presence of contaminants.

3A Schedule of human uses of particular aquifers

Aquifer	Map	Values
Lower Waitaki Plains Aquifer	C15, C16 & C17	<ul style="list-style-type: none"> - Human consumption without treatment - Stock drinking water supply and farm dairy water.
Papakaio Aquifer	C15 & C17	<ul style="list-style-type: none"> - Irrigation
North Otago Volcanic Aquifer	C15, C16, C17 & C18	<ul style="list-style-type: none"> - Irrigation
Kakanui-Kauru Alluvium Aquifer	C17 & C18	<ul style="list-style-type: none"> - Human consumption without treatment - Stock drinking water supply and farm dairy water - Irrigation
Shag Alluvium Aquifer	C19	<ul style="list-style-type: none"> - Human consumption without treatment - Human consumption with treatment - Stock drinking water supply - Irrigation
Ettrick Basin Aquifer	C21	<ul style="list-style-type: none"> - Human consumption without treatment - Stock drinking water supply and farm dairy water - Irrigation
Roxburgh Basin Aquifer	C20	<ul style="list-style-type: none"> - Human consumption without treatment - Stock drinking water supply - Irrigation - Industrial
Lower Taieri Aquifer	C24 & C25	<ul style="list-style-type: none"> - Human consumption without treatment - Stock drinking water supply and farm dairy water - Irrigation - Industrial

SCHEDULE 3: HUMAN USE VALUES OF AQUIFERS

3B Schedule of groundwater takes for the purpose of community water supply

Site No.	Community Water Supply Takes (at NZMS 260 Series Map Grid Reference)	Rate (litres per second) and volume (cubic metres per day) authorised
1*	Glenorchy Water Supply at E41:459-841.	63 l/s; 5400 m ³ /day
2*	Arthurs Point Water Supply at E41:686-713.	49 l/s; 3385 m ³ /day
3*	Dalefield Water Supply at F41:739-724.	6 l/s; 300 m ³ /day
4*	Arrowtown Water Supply at: F41:806-773; F41:808-774; and F41:809-774.	108 l/s; 7800 m ³ /day
5*	Cromwell Water Supply at G41:119-671.	210 l/s; 18,000 m ³ /day
6*	Alexandra Water Supplies at: G42:253-444; G42:263-454; and G42:271-442	420 l/s; 21,600 m ³ /day 12.5 l/s; 675 m ³ /day 4 l/s; 345 m ³ /day
7*	Roxburgh Water Supply at G43:210132.	58 l/s; 3000 m ³ /day
8*	Dunedin and Outram Water Supplies at: I44:956-803; I44:956-805; and I44:956-804.	Combined total take of 382 l/s; 33,000 m ³ /day
11	Owaka Water Supply at H46:533-124.	4.4 l/s; 380 m ³ /day
12	Mosgiel Water Supply at: I44:048-789; I44:042-779; I44:036-776; I44:048-789; I44:036-788*; I44:051-787; I44:032-782; I44:051-789; and I44:042-784.	The combined total take shall not exceed 10,104 m ³ /day.
13*	Clydevale-Pomahaka Water Supply at G45:417-507.	60 l/s; 5160 m ³ /day

* Point of take located within 100 metres of a surface water body.

4. Schedule of the allocation and restriction regime for groundwater

This schedule sets out restrictions that apply to the taking of groundwater from certain aquifers in Otago.

Schedule 4A identifies maximum allocation limits for the taking of groundwater from aquifers identified in the C-series maps, in accordance with Policy 6.4.10A2(a) of this Plan. Schedule 4B identifies water levels at which the taking of groundwater will be restricted in accordance with Policy 6.4.10A1(b) of this Plan. Schedule 4C identifies matters to be considered when making additions to these schedules through a plan change.

4A Maximum allocation limits for groundwater takes from aquifers

Aquifer Name	Map Reference	Maximum Allocation Limit (million cubic metres per year)
Cromwell Terrace Aquifer	C7	4
North Otago Volcanic Aquifer	C15, C16, C17 & C18	7

4B Restrictions for groundwater takes

4B.1 Restriction levels for groundwater takes

Schedule 4B.1 identifies water levels at which the taking of groundwater will be restricted, and identifies the nature of the restriction, in terms of a reduction in the take of water authorised by water permits.

The aquifer maximum height refers to the historic record of the water level or pressure head after the recharge season. Note that the areas over which the restrictions apply are shown on Maps D1-D4.

Aquifer See Maps D1–D4	Aquifer Reference Bore See Maps D1–D4	Aquifer maximum height (metres above datum)	Restriction levels (metres above datum)		
			25% restriction or response in terms of Council recognised rationing regime*	50% restriction	100% restriction
North Otago Volcanic	Websters Well	130.8	126.0	125.5	125.0
Lower Taieri – West	Momona Bore	101.24	100	99.5	99
Lower Taieri – East	Harleys Well, Piezo. 2	112.5	110.5	110.0	109.5
Ettrick Basin	Cemetery Bore	172.29	170.29	169.79	169.29
Roxburgh Basin (Coal Creek Terrace)	White-Hall Bore	189.5	188	187.8	187.5

* When the aquifer reaches this level there shall be either a 25% restriction or a water allocation committee, appointed by the Otago Regional Council, will implement a protocol to take all practical steps to curb the decline in the aquifer level so as to avoid a 50% restriction. If there is no water allocation committee or the water allocation committee does not use a protocol approved by the Council, the 25% water restriction

SCHEDULE 4: ALLOCATION AND RESTRICTION REGIME
FOR GROUNDWATER

will apply.

4B.2 Restrictions for Cromwell Terrace Aquifer

There shall be no takes from the Cromwell Terrace Aquifer for irrigation purposes between 1 May and 31 August inclusive in each year.

Because the Cromwell Terrace Aquifer is hydraulically connected to Lake Dunstan, other restrictions may be imposed on resource consents to take water, to help maintain lake levels.

4C **Schedule of matters to be considered when setting maximum allocation limits and restriction levels for aquifers**

Maximum allocation limits and restriction levels for aquifers in Schedules 4A and 4B give effect to the objectives and policies in this Plan. Additional aquifers are added through the plan change process following scientific investigation and consultation with the community and affected parties. The lists in 4C.1 and 4C.2 identify matters to which consideration will be given when setting these volumes and levels. The lists are not exhaustive and consideration will be given to these and any other relevant matters. Restriction levels may not be needed for all aquifers.

4C.1 When setting maximum allocation limits in Schedule 4A for an aquifer, consideration will be given to the following matters:

- (a) Physical properties of the aquifer;
- (b) The amount and characteristics of recharge to the aquifer;
- (c) Interaction with other aquifers;
- (d) Interaction with surface water bodies and their values;
- (e) The potential for contamination (including seawater intrusion);
- (f) The effects of taking groundwater on the aquifer (including results of computer modelling, where available);
- (g) Demand for water and existing water uses, including community water supplies;
- (h) Environmental, social, cultural, recreational and economic benefits of taking and using water; and
- (i) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

4C.2 When setting restriction levels in Schedule 4B for an aquifer, consideration will be given to the following matters:

- (a) Physical properties of the aquifer;
- (b) Variance of groundwater levels in the aquifer;
- (c) The amount and characteristics of recharge to the aquifer;
- (d) The proposed or existing maximum allocation limit;
- (e) Interaction with surface water bodies and their values;
- (f) Any actual or potential effect of drawdown on groundwater quality; and

- (g) The environmental, social, cultural and economic effects of the restriction level on existing users of groundwater from the aquifer.

Note: For aquifers not included in Schedule 4A, refer to Policy 6.4.10A2(b) for determining a maximum allocation limit.

4D Matters to be considered in calculating mean annual recharge

For any aquifer not included in Schedule 4A the setting of the maximum allocation limit will involve calculating the mean annual recharge of the aquifer (see Policy 6.4.10.A2(b)). The mean annual recharge is a statistical value based on the past climate, aquifer hydrology, soil properties, irrigation practice and other factors with direct influence over groundwater recharge.

This schedule sets out the matters to which consideration will be given when calculating the mean annual recharge of an aquifer.

4D.1 Sources of aquifer recharge

Sources of aquifer recharge may include:

- (a) Land surface recharge due to rainfall excess.
- (b) Land surface recharge due to irrigation excess, which should be based on the application of irrigation at an efficient rate.
- (c) Land surface recharge due to intermittent runoff flowing over the land surface.
- (d) Surface water recharge due to river infiltration.
- (e) Surface water recharge due to wetland, pond or lake infiltration.
- (f) Through-flow from any other aquifer.

The mean annual recharge can arise from a single recharge source or a combination of recharge sources, in which case the mean annual recharge is based on the combined recharge from all relevant sources.

4D.2 Methods for calculating aquifer recharge

Methods for calculating aquifer recharge from various recharge sources may include:

- (a) Daily soil moisture balance for the calculation of land surface recharge.
- (b) Daily soil moisture balance for calculation of irrigation recharge.
- (c) Differences between surface water flows measured at different flow monitoring sites for the determination of bed infiltration passing to an aquifer.
- (d) Direct measurement of land surface recharge using subsoil measuring devices such as lysimeters.
- (e) Calibrated recharge estimation using unsaturated zone matric potential or saturated zone water table height fluctuation.
- (f) Environmental tracers such as isotopes (radioactive or stable) and conservative anions.
- (g) Groundwater computer modelling, especially where calibration and parameter estimation can be used to constrain initial estimates of surface water contributions and land surface recharge.

5. Schedule of limits to instantaneous take of groundwater

5A Schedule of equations to determine stream depletion effects of the take of groundwater

Requirement to determine stream depletion on surface water

The Bekesi and Hodges¹ equations are used to determine whether a proposed groundwater take may have an effect on nearby surface water that is greater than 5 litres per second.

The Bekesi and Hodges equations are preferred to other equations reported in the literature as they are less demanding of hydrogeological data, and allow a reasonable relationship to be calculated empirically, which can be transposed to determine the threshold distance between the point of groundwater take and the surface water body. These equations consider pumping occurs over 30 days, and assumes a 90 percentile confidence. Which equation is used depends on the proposed maximum rate of take (Q in litres per second):

$$\begin{array}{ll} \text{Where } 5 \text{ l/s} \leq Q \leq 25 \text{ l/s} & r = 65 \times Q \\ \text{Where } Q > 25 \text{ l/s} & r = 1138 \times \log Q \end{array}$$

r = distance between abstraction structure and surface water body (metres)

If r is greater than the actual distance from the point of groundwater take to the surface water body, then the stream depletion effect is considered to be greater than 5 litres per second. However, there may be exceptions to the empirical relationship (see below).

Calculation of stream depletion effect and allocation to surface water

The Jenkins² equations are used to calculate the stream depletion effects (or Q_s) which will be considered against the available allocation of the relevant surface water body.

$$Q_s = Q_w \text{erfc}(U)$$

$$U = -(r^2 S / 4 T t)$$

Where:

- Q_s is the rate of stream depletion (cubic length per time)
- Q_w is the pumping rate of the well (cubic length per time)
- r is the perpendicular distance from the point of groundwater take to the surface water body (length)
- S is the storativity (or specific yield) of the aquifer (dimensionless)
- T is the transmissivity of the aquifer (square length per time)
- t is time
- 'erfc(U)' refers to the Complementary Error Function of U

SCHEDULE 5: LIMITS TO INSTANTANEOUS GROUNDWATER TAKES

Where subsurface intake structures have a bore head in a different location from the position of the intake screen, the closest part of the intake screen or gallery should be used for the purpose of measuring the distance to the surface water body in terms of Policy 6.4.1A(c) and the equations set out above.

Situations where stream depletion effect is unlikely

There are a number of situations where the stream depletion effect of groundwater is not likely to be valid; these include hydrological factors related to the depth of the bore screen. In addition, the Bekesi and Hodges, or Jenkins equations have situations where they are less valid or have violated their basic assumptions. The situations referred to above are summarised as follows:

Where the adjacent surface water body;

- (a) Has an impermeable bed; or
- (b) Is ephemeral, or dry for extended periods, containing or conveying water only in episodes of high runoff; or
- (c) Is separated from the underlying water table by an unsaturated zone, decoupling the interaction into a one-way loss of surface water from the surface water body.

Where the groundwater system;

- (a) Has very low permeability (e.g. schist fractured rock aquifers. Although the low permeability will calculate a very low stream depletion effect in the Jenkins equation, this is not considered in the empirical Bekesi and Hodges equations); or
- (b) Has very steep gradients or perched water tables adjacent to surface water body boundaries; or
- (c) Does not influence surface water due to the depth of the bore or well screen.

These situations are often not immediately discernable and may require a higher level of assessment to distinguish the nature of connection between groundwater and surface water. Where an applicant seeks that Policy 6.4.1A should not apply, and that the take should be considered as a full groundwater take under the provisions of 12.2, then the applicant may apply to take groundwater as a discretionary activity under Rule 12.2.4.1.

Use of analytical equations other than the Jenkins Equation:

The use of analytical equations will be accepted over the equations given above, when an applicant can clearly demonstrate:

- 1) That the analytical equation is derived from, or is otherwise comparable to, the Jenkins Equation; and
- 2) That this equation is in common use for the purpose, and shares a degree of acceptance in such use amongst groundwater professionals.

SCHEDULE 5: LIMITS TO INSTANTANEOUS
GROUNDWATER TAKES

Use of numerical groundwater flow models:

The use of numerical groundwater flow models will be accepted over the equations given above, when an applicant can clearly demonstrate:

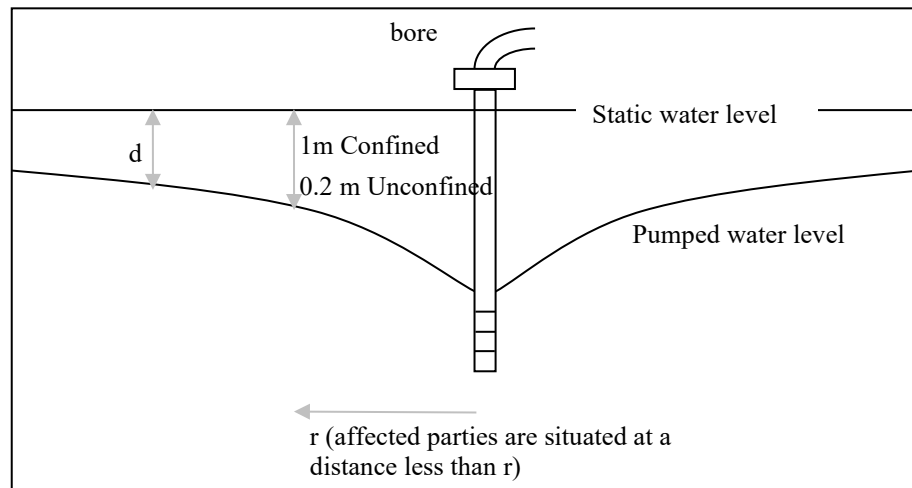
- 1) That the numerical method is validated or potentially validated at a generic level against either the Theis Equation or the Jenkins Equation; and
- 2) That the model is in common use for the purpose, and shares a degree of acceptance in such use among groundwater professionals.

¹ Bekesi, G; and Hodges, S. 2006: The protection of groundwater dependent ecosystems in Otago, New Zealand. Hydrogeology Journal. Vol. 14, No 8, December 2006, pp 1696–1701.

² Jenkins, C T, 1977: Computation of rate and volume of stream depletion by wells. In “Techniques of Water Resource Investigations of the United States Geological Survey”. Chapter D1, Book 4, 3rd Edition. USGS, Department of Interior, Washington DC.

5B Schedule of method for identifying groundwater takes potentially affected by bore interference

This schedule is the method for identifying parties likely to be affected by bore interference when a new application to take groundwater is received. The significance of any interference may result in limits being placed through conditions on permits to take groundwater, depending on distance from another bore, and may limit the instantaneous take of groundwater from any one bore in order to maintain existing access to water.



The radius will be determined using a significant interference of $d \geq 1$ m for confined aquifers or $d \geq 0.2$ m for unconfined aquifers, and the ‘Theis’ equation:

$$d = QW(u)/4\pi T \text{ where } u=r^2S/4Tt$$

Also where:

d is the interference

SCHEDULE 5: LIMITS TO INSTANTANEOUS
GROUNDWATER TAKES

- Q** is the pumping rate from the bore
W(u) is the "well equation", approximated by a Taylor series:
$$-0.5772 - \ln(u) + u - u^2/2 \cdot 2! + u^3/3 \cdot 3! - \dots$$

r is the distance from the pumping bore
S is specific yield/storativity of the unconfined/confined aquifer
t is the time or duration of pumping
T is the transmissivity of the aquifer

For clarification, the variables required for the 'Theis' equation will be quantified as follows:

- Q** from the consent application: maximum daily volume
r from maps, aerial photos, or preferably GPS coordinates
T and S from pumping tests or conservative estimates
t (in days) from consent application: maximum annual volume divided by the maximum daily volume

If a variable cannot be estimated from the consent application or the applicant did not supply the information, the Council will estimate it on an environmentally conservative basis.

SCHEDULE 6: WATER BODIES WHERE DAMMING IS PROHIBITED

6. Schedule of water bodies where damming is prohibited

This schedule identifies water bodies in Otago, or parts of water bodies, in which the damming of water is prohibited in accordance with Policy 8.5.2, and Rules 12.3.1.1, 12.3.1.2, and 12.3.1.3 of this Plan. Note that the damming of water for stockwater supply purposes is not prohibited in some of the identified water bodies. Such management of these water bodies is required by the Water Conservation (Kawarau) Order 1997.

Water body	Grid references	Type of dam prohibited
Kawarau River main stem from Scrubby Stream to the Lake Wakatipu control gates.	F41:035680 to F41:738667	Any dam.
Shotover River main stem	At or about F41:765680 to E40:662173	Any dam.
Dart River/Te Awa Whakatipu main stem from Lake Wakatipu to its confluence with Beans Burn.	At or about E41:438853 to E40:375077	Any dam.
Rees River main stem from Lake Wakatipu to its confluence with Hunter Creek.	At or about E41:448852 to E40:499117	Any dam.
Diamond Lake, Diamond Creek and Lake Reid.	At or about E40:435975; E41:444963 to E40:450918	Any dam.
Lake Wanaka and Upper Clutha River/Mata-Au	F40:050089 to F40:088067	All dams other than for the duration of an emergency.
Pomahaka River, including its tributaries, from its sources to its confluence with the Clutha River/Mata-Au.	Confluence at G45:447453	All dams other than for stockwater supply purposes.
Waipahi River from its source to its confluence with the Pomahaka River.	Confluence at G45:194520	All dams other than for stockwater supply purposes.
Lower Clutha River/Mata-Au from its confluence with the Pomahaka River to the sea at the mouths of the Matau and Koau Branches.	G45:447453 to H46:667263 and H46:642239	All dams other than for stockwater supply purposes.

SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION
DREDGE MINING

7. Schedule of water bodies sensitive to suction dredge mining

This schedule identifies water bodies in Otago, or parts of water bodies, that are sensitive to bed disturbance caused by suction dredge mining due to their unique value for fish spawning or rearing, or their importance for water supply. Suction dredge mining in the identified water bodies, and during any identified time period, will require a resource consent under Rule 13.5.3.1 of this Plan (see Policy 8.6.3). The water bodies identified support values that need to be taken into account when considering consent applications to suction dredge. See Maps E1-E9 for areas affected and their numbers.

North Otago subregion			
Water body	Values	Grid References	Area No.
Waianakarua River	Native fish diversity	Catchment upstream of J42:370472	1

Maniototo subregion			
Water body	Values	Grid References	Area No.
Ewe Burn	Native fish habitat	Catchment upstream of H42:808587	2
Kye Burn	Native fish habitat	Catchment upstream of I42:946585	3
Sow Burn	Fisheries values	Catchment upstream of H42:785532	4
Pig Burn	Fisheries values	Catchment upstream of H42:828532	5
Taieri River (Between Hore's Bridge and Long Point) <i>From 1 March to 31 October</i>	Fisheries values	Main stem between H42:713380 and H42:744352	6
Waimonga Creek	Native fish habitat	Catchment upstream of H42:542308	7
Waimonga Creek	Native fish habitat	Catchment upstream of H43:542299	8
Totara Creek	Native fish habitat	Main stem between H42:620342 and 553304	9
Linn Burn	Native fish habitat	Catchment upstream of H42:655323	10
McPhees Creek	Native fish habitat	Catchment upstream of H43:729211	11
McHardys Creek	Fisheries values	Catchment upstream of H43:710151	12
Shepherds Hut Creek	Fisheries values	Catchment upstream of H43:645123	13
Unnamed tributary of the Logan Burn	Native fish habitat	Catchment upstream of H43:614115	14
Taieri River	Native fish habitat	Catchment upstream of H43:549027	15

Central Otago subregion			
Water body	Values	Grid References	Area No.
Cardrona River	Fisheries values	Catchment upstream of F40:087067	16
Unnamed tributary of the Clutha River/Mata-Au	Native fish habitat	Catchment upstream of G40:207933	17
Cluden Stream	Fisheries values	Catchment upstream of G40:342942	18
Dunstan Creek	Fisheries values	Catchment upstream of H41:545745	19
Manuherikia River	Fisheries values	Catchment upstream of H41:661902	20
Gate Creek	Fisheries values	Catchment upstream of H41:664901	21

SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION
DREDGE MINING

Central Otago subregion			
Water body	Values	Grid References	Area No.
Earnsclough or Fraser River	Fisheries values	Catchment upstream of G42:160507	22
Earnsclough or Fraser River	Fisheries values	Main stem between G42:200490 and Clutha River/Mata-Au	23
Cranky Woman Creek	Fisheries values	Catchment upstream of H42:572378	24
Manor Burn Creek	Fisheries values	Catchment upstream of G43:447243	25

Lakes subregion			
Water body	Values	Grid References	Area No.
All rivers flowing into Lake Wakatipu	Fisheries values	-	26
All rivers flowing into Lake Wanaka	Fisheries values	-	27
All rivers flowing into Lake Hawea	Fisheries values	-	28
Skippers Creek	Native fish habitat	Catchment upstream of E41:690896	29
Moke Creek	Fisheries values	Catchment upstream of E41:609701 (both branches)	30
Lake Kirkpatrick outlet stream	Fisheries values	Main stem between Lake Kirkpatrick and Moke Lake	31
Mill Creek	Fisheries values	Catchment upstream of Lake Hayes	32
Hayes Creek	Fisheries values	Main stem between Lake Hayes and Kawarau River	33
Nevis River	Fisheries values	Catchment upstream of F41:979644	34

Roxburgh subregion			
Water body	Values	Grid References	Area No.
Benger Burn	Native fish habitat	Catchment upstream of G43:253006	35
Tima Burn	Native fish habitat	Catchment upstream of G44:293999	36
Unnamed tributary of Lake Onslow	Native fish habitat	Catchment upstream of G43:451133	37

Strath Taieri subregion			
Water body	Values	Grid References	Area No.
Cap Burn	Fisheries values	Main stem between I42:959462 and 955462	38
Mare Burn	Fisheries values	Main stem between I42:971432 and 975432	39
Lug Creek	Fisheries values	Catchment upstream of H43:880257	40
Stoney Creek	Native fish habitat	Catchment upstream of H43:712088	41
Nenthorn Stream	Native fish habitat	Catchment upstream of I43:944054	42

SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION
DREDGE MINING

Waikouaiti/Lammermoor subregion			
Water body	Values	Grid References	Area No.
Deep Creek	Water Supply	Catchment upstream of H43:665037	43
Deep Stream	Native fish habitat Water Supply	Catchment upstream of H44:683996	44
Lee Stream/Canton Stream	Native fish habitat	Main stem between H44:761909 and 701915	45
Black Rock Stream	Native fish habitat	Catchment upstream of H44:744883	46
Smugglers Creek	Native fish habitat	Catchment upstream of I44:936830	47
Taieri River	Water supply values (land instability threat to water pipeline)	Main stem between I44:009868 and 976830	48
Christmas Creek	Fisheries values	Main stem between I44:038953 and 039955	49
Three O'clock Stream	Fisheries values	Main stem between I44:024974 and Taieri River	50
Three O'clock Stream	Native fish habitat	Main stem between I43:111096 and 077138	51
Waikouaiti River	Native fish habitat Water Supply	Catchment upstream of I43:232079	52

Coastal subregion			
Water body	Values	Grid References	Area No.
Burns Creek	Water Supply	Catchment upstream of I44:158883	53
Jeffersons Creek	Water Supply	Catchment upstream of I44:160873	54
Williams Creek	Water Supply	Catchment upstream of I44:159870	55
Sullivans Dam intake	Water Supply	Catchment upstream of I44:172863	56
Water of Leith, West Branch	Water Supply	Catchment upstream of I44:164857	57
Morrisons Creek	Water Supply	Catchment upstream of I44:160843	58
Nicols Creek	Water Supply	Catchment upstream of I44:153833	59
Ross Creek	Water Supply	Catchment upstream of I44:152820	60
Orokonui Creek	Native fish diversity	Catchment upstream of I44:221921	61
Wetherstons Creek (Waitati River tributary)	Water Supply	Catchment upstream of I44:201882	62
Rossville reservoir intake	Water Supply	Catchment upstream of I44:233865	63
Sawyers Bay Stream	Native fish habitat	Catchment upstream of I44:235851	64
Unnamed tributary of Otago Harbour	Native fish habitat	Catchment upstream of I44:277825	65
Weipers Creek	Native fish habitat	Catchment upstream of I44:281792	66
Big Creek	Native fish habitat	Catchment upstream of H45:864482	67

Taieri/Clutha Plains subregion			
Water body	Values	Grid References	Area No.
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:553814	68
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:563813	69
Stony Creek	Native fish habitat	Catchment upstream of H44:606839	70

**SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION
DREDGE MINING**

Taieri/Clutha Plains subregion			
Water body	Values	Grid References	Area No.
Taieri/Clutha Plains subregion			
Water body	Values	Grid References	Area No.
Nardoo Stream	Native fish habitat	Catchment upstream of H44:649831	71
North West Stream	Native fish habitat	Catchment upstream of H44:697840	72
Unnamed tributary of Pioneer Stream	Native fish habitat	Catchment upstream of H44:703752	73
Unnamed tributary of Lake Mahinerangi	Native fish habitat	Catchment upstream of H44:722768	74
Shepherd Stream	Native fish habitat	Main stem between H44:737737 and 725736	75
Unnamed tributary of Shepherd Stream	Native fish habitat	Catchment upstream of H44:724728	76
Unnamed tributary of Shepherd Stream	Native fish habitat	Catchment upstream of H44:732732	77
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:749756	78
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:765750	79
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:780741	80
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:777756	81
Unnamed tributary of Waipori River	Native fish habitat	Catchment upstream of H44:782746	82
Mill Creek	Water Supply	Catchment upstream of H44:833730	83
Verter Burn	Native fish habitat	Catchment upstream of H44:794799	84
Silver Stream	Native fish diversity Water Supply	Catchment upstream of I44:039789	85
Meggat Burn	Water Supply	Catchment upstream of H45:744693	86
Tokomairiro River West Branch	Fisheries values	Catchment upstream of H45:747487	87
Lake Tuakitoto	Native fish habitat	Catchment upstream of H45:647407	88
Unnamed tributary of Lake Tuakitoto	Native fish habitat	Catchment upstream of H46:660392	89
Saddle Stream	Native fish habitat	Catchment upstream of H46:657389	90
McCrosties Drain	Native fish habitat	Catchment upstream of H46:654372	91
Lake Tuakitoto	Native fish habitat	Catchment upstream of H46:687369	92

Southwest Otago subregion			
Water body	Values	Grid References	Area No.
Tuapeka River	Water Supply	Catchment upstream of G44:491742	93
All streams flowing into the Phoenix Dam	Water Supply	Catchment upstream of Dam at H44:545755	94
Waitahuna River	Native fish habitat	Catchment upstream of H44:624790	95
Tuapeka Creek	Fisheries values	Main stem between H44:508721 and Tuapeka River	96
Tuapeka River	Fisheries values	Catchment between G45:471669 and Clutha River/Mata-Au, including all tributaries of this reach	97
Waitahuna River	Fisheries values	Main stem between H45:619659 and Clutha River/Mata-Au	98

SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION
DREDGE MINING

Pomahaka River	Native fish habitat Fisheries values Water Supply	Catchment upstream of G45:445453	99
Waiwera River	Native fish habitat	Catchment upstream of G46:283301	100

Catlins subregion			
Water body	Values	Grid References	Area No.
Unnamed tributary of Mokoreta River	Native fish habitat	Catchment upstream of G46:214247	101
Catlins River	Native fish habitat	Catchment upstream of G46:274228	102
Unnamed tributary of Catlins River	Native fish habitat	Catchment upstream of G46:380169	103
Frank Stream	Native fish habitat	Catchment upstream of G46:400141	104
Matai Stream	Native fish habitat	Catchment upstream of G47:404059	105
Unnamed Creek	Native fish habitat	Catchment upstream of G47:457046	106
MacKenzie Stream	Native fish habitat	Catchment upstream of G47:469051	107
Waitere Stream	Native fish habitat	Catchment upstream of G47:485043	108
Unnamed tributary of Catlins Lake	Native fish habitat	Catchment upstream of H47:561074	109
Unnamed tributary of Owaka River	Native fish habitat	Catchment upstream of H46:553143	110
Burnt Scrub Creek	Native fish habitat	Catchment upstream of H46:595183	111
Unnamed Creek	Native fish habitat	Catchment upstream of H46:600175	112
Nugget Stream	Native fish habitat	Catchment upstream of H46:631160	113

SCHEDULE 8: REQUIREMENTS FOR DISCHARGE OF ANIMAL WASTE

8. Schedule of requirements for discharge of animal wastes

This schedule establishes requirements for the discharge of contaminants from any waste collection system onto production land. If these requirements are met, in addition to the conditions set out in Rules 12.C.1.1 and 12.C.1.1A, and the discharge is not prohibited under 12.C.0.2, such a discharge is a permitted activity under this Plan.

The schedule specifies a maximum application depth, a maximum application rate and a minimum return period.

- The **maximum application depth** is the amount of animal waste that can be applied at any one time.
- The **maximum application rate** is the speed at which animal waste can be applied.
- The **minimum return period** is the time which should expire before animal waste is reapplied to the same land.

These requirements vary depending on the soil type as each soil type has a different capacity to assimilate contaminants. The requirements will ensure that this assimilative capacity is not exceeded by the discharge of animal waste.

ANIMAL WASTE APPLICATION FOR VARIOUS SOIL TYPES UNDER PASTURE COVER			
Soil Type	Maximum Application Depth at any One Time	Maximum Application Rate	Minimum Return Period
Sand and loamy sand	25mm	32mm/hr	15 days
Sandy loam and fine sandy loam	25mm	20mm/hr	15days
Silt and sandy silt loam	25mm	17mm/hr	20 days
Clay and clay loam	25mm	10mm/hr	20 days
Peat	25mm	17mm/hr	15 days

Note: The values in this table are based on soil moisture under 50% saturation. Any person applying animal waste on soils exceeding 50% saturation will need to adjust their application depth and rate accordingly, to avoid breaching rule conditions.

The following conversions may be useful:

- Amounts in mm to litres per hectare: multiply by 10,000.
- Amounts in mm/hr to litres per hectare per hour: multiply by 10,000.

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT WETLANDS AND WETLAND MANAGEMENT AREAS

9 Schedule of identified Regionally Significant Wetlands and Wetland Management Areas

This schedule lists Otago's identified Regionally Significant Wetlands and Wetland Management Areas. An identified Regionally Significant Wetland or Wetland Management Area is one that has been mapped in Maps F1–F63 and contains one or more regionally significant wetland values (see Chapter 10).

The ORC holds an inventory on wetlands, including all Regionally Significant Wetlands listed in Schedule 9, as well as some wetlands that are not included in this Schedule. The inventory is available on the ORC website. The inventory is intended for information purposes only. It is not incorporated by reference in this plan and does not form part of this plan or any other regulatory document. It is a stand-alone repository for data and information and has no legal effect.

In addition, GIS (geographical information systems) data on wetland extents can be made available on request.

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT
WETLANDS AND WETLAND MANAGEMENT AREAS

**Index to Otago's Identified Regionally Significant Wetlands and Wetland
Management Areas**

#	Wetland Name	Map
1	Akatore Creek Swamp	F42
2	All Day Bay Lagoon	F60
3	Andersons Pond Margins	F52
4	Aramoana Saltmarsh	F53
6	Belmont Inland Saline Wetland Management Area	F22
7	Bendigo Wetland	F16
8	Big Boggy Swamp	F1
9	Black Rock Marshes	F63
10	Black Swamp	F29
11	Blackcleugh Burn Swamp	F28
12	Blackmans Inland Saline Wetland Management Area	F12
13	Blair Fen	F31
14	Blair Swamp	F31
15	Boundary Creek Fen	F27
16	Braeside Swamp	F57
17	Bungtown Bog	F47
18	Butterfield Wetland	F2
172	Cairn Road Bog	F35
19	Camp Stream Swamp	F40
20	Campbells Reserve Pond Margins	F3
21	Cannibal Bay Road Swamp	F36
22	Catlins River Wetland	F33
23	Chapman Road Inland Saline Wetland	F16
24	Cheetwood Road Wetlands	F38
25	Church Hill Wetland Complex	F6
26	Clachanburn Marsh	F22
27	Clifton Hill Marshes	F29
28	Clutha Matau Wetlands	F37
29	Clutha River Mouth Lagoon	F37
30	Conroys Dam Inland Saline Wetland Management Area	F16
31	Conroys Road Inland Saline Wetland Complex	F16
87	Coutts Gully Swamp	F42
32	Cross Eden Creek Marsh Complex	F14
33	Culcairn Oxbow Marsh	F38
34	Devils Bridge Wetland	F59
35	Diamond Lake Wetland	F3
36	Dingle Lagoon	F1
37	Dunard Inland Saline Wetland Management Area	F11
38	Dunvegan Fen Complex	F34
39	East Benhar Swamp	F39
40	Ellison Saltmarsh	F56
41	False Islet Wetland Management Area	F36
42	Fernhill Marsh	F51
43	Finegand Lagoon Marsh	F38

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT
WETLANDS AND WETLAND MANAGEMENT AREAS

#	Wetland Name	Map
44	Flat Top Hill Ephemeral Wetlands	F17
45	Fortification Creek Wetland Management Area	F27
46	Fortification Stream Headwaters Swamp	F52
47	Frasers Stream Headwaters Marsh Complex	F40
48	Galloway No. 1 Inland Saline Wetland Complex	F12
49	Galloway No. 2 Inland Saline Wetland Management Area	F12
50	Gilmour Road Marsh	F13
51	Glendhu Swamp	F28
52	Glenorchy Lagoon Wetland	F8
53	Glyn Wye Wetland Management Area	F51
54	Governors Point Swamp	F43
55	Great Moss Swamp	F26
56	Harrington Mill Road Swamp	F31
57	Hawkdun Runs Road Marsh	F18
58	Hawksbury Lagoon	F56
59	Hazeldale Fens	F49
60	Henley Swamp	F44
61	Hoopers Inlet Swamp	F54
62	Hukihuki Swamp	F32
63	Hungerford Point Saltmarsh	F32
64	Hut Creek Swamps	F18
65	Island Block Pond Marshes	F15
66	Jennings Creek Marsh	F53
67	John O'Groats Hill Fen	F28
68	Kaikorai Lagoon Swamp	F57
69	Kakaho Creek Swamp	F60
70	Kemp Road Lagoon	F60
71	Kinloch Wetland	F3
72	Kirk Creek Headwaters Marsh Complex	F15
73	Kirkwoods Creek Wetland Management Area	F14
74	Kuriwao Saddle Fen Complex	F49
75	Lake Hayes Margins	F7
76	Lake Reid Wetland	F3
77	Lake Tuakitoto Wetland	F39
78	Lake Wilkie Swamp	F32
79	Lamb Hill Fen Complex	F53
80	Laws Road Swamp	F11
81	Lenz Reserve Wetlands	F32
82	Little Boggy Swamp	F51
83	Little Stoney Bog	F4
84	Loch Loudon Fen Complex	F46
85	Loch Luella Fen Complex	F46 & F47
86	Long Gully Marsh	F12
88	Lower Manorburn Dam Margins	F13
89	Lower Otokia Creek Marsh	F54
91	Macfarlane Road Oxbow Swamp	F30
92	Maclennan River Podocarp Swamp Complex	F50

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT
WETLANDS AND WETLAND MANAGEMENT AREAS

#	Wetland Name	Map
93	Makarora Flat Swamp Complex	F1
94	Malones Dam Margins	F28
95	Marana Swamp	F30
96	Matakauri Wetland	F4
97	Matukituki Bluff Ephemeral Wetland Management Area	F2
98	Matukituki Valley Wetland Management Area	F5
99	Maungatua Summit Wetland Management Area	F58
100	McGregor Swamp	F56
101	McKays Triangle Wetland	F54
102	McLachlan Road Marsh	F56
103	Measly Beach Wetland Complex	F41
104	Middle Swamp	F27
105	Minaret Bay Swamp	F1
106	Moa Creek Inland Saline Wetland	F12
107	Moke Creek Swamp	F4
108	Moke Lake Bog	F4
109	Molyneux Bay Swamp	F37
110	Mount Nicholas Lagoon	F7
111	Murrays Road Inland Saline Wetland Management Area	F51
112	Nenthorn Ridge Wetland Management Area	F59
113	Nevis Red Tussock Fen	F17
114	Office Creek Seepage	F58
115	Okia Flat Wetland Management Area	F63
116	Old Dunstan Road Swamp	F52
117	Otanomomo Tuatiki Reserve	F33
118	Otokia Swamp	F57
119	Paddys Rock Ephemeral Tarn	F59
120	Papanui Inlet Saltmarsh	F61
121	Patearoa Inland Saline Wetland	F22
122	Peat Moss Hills Fen Complex	F55
123	Pleasant River Estuary Wetland Complex	F62
124	Pomahaka River Oxbow Marsh (Dalvey School Road)	F29
125	Pomahaka River Oxbow Marsh (Koi Creek)	F29
126	Ratanui Swamp	F33
127	Red Bank Wetland Management Area	F62
128	Reefs Pond Margins	F52
129	Rigney Pond Margins	F15
130	Rockdale Inland Saline Wetland Management Area	F11
131	Rocky Hill Tidal Marshes	F43
132	Samson Hill Marshes	F31
133	Scaifes Lagoon	F2
134	Schoolhouse Flat Red Tussock Fen	F17
135	Shag Point Dam Margins	F59
136	Shag River Estuary Swamp	F59
137	Shotover River Confluence Swamp	F8
138	Signal Hill Swamp	F8
139	Stirling Marsh Complex	F39

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT
WETLANDS AND WETLAND MANAGEMENT AREAS

#	Wetland Name	Map
140	Stuarts Marsh	F50
141	Styx Ephemeral Wetland Management Area	F13
142	Sutton Salt Lake Wetland Management Area	F55
143	Swampy Summit Swamp	F53
144	Tahakopa Bay Podocarp Swamp	F50
145	Tahakopa Marsh Complex	F36
146	Tahakopa River Bogs	F50
147	Takitoa Swamp	F43
148	Tautuku River Mouth Marsh	F32
173	Tavora Wetland	F61
171	Te Hua Taki Wetland	F61
149	Te Matai Marsh Complex	F63
150	The Neck Wetlands	F2
151	Three Stones Fen Complex	F49
152	Timber Creek Seepage	F11
153	Tokomairiro River Swamp	F48
154	Tomahawk Lagoon	F54
155	Totara Creek Inland Saline Wetland	F22
157	Trig Y Bogs	F30
158	Two Stone Hill Stream Swamp	F40
159	Upper Black Stream Marshes	F13
160	Upper Tahakopa Swamps	F31
161	Upper Taieri Wetlands Complex	F19 to F25
162	Upper Waiareka Creek Swamp	F61
163	Von Valley Wetland Complex	F9 & F10
164	Waianakarua River Estuary Swamp	F60
165	Waikouaiti River Estuary Wetland Complex	F56
166	Waipori Boot Swamp	F44 & F45
167	Waipori/Waihola Wetlands Complex	F44 & F45
168	Wairepo Creek Marsh Complex	F34
169	Whareakeake Marsh	F53
170	Willowburn Bog	F30

SCHEDULE 10: [REPEALED]

10 *[Repealed – 1 October 2013]*

11 *[Repealed – 1 March 2012]*

12 Schedule of coastal marine area boundaries

This schedule, and the accompanying maps, identify the boundary of the coastal marine area at Otago’s river mouths. Water on the landward side of the identified boundary is subject to the provisions of this Plan, while water on the coastal side is subject to the provisions of the Regional Plan: Coast.

Waitaki District

Water body	Description of mouth and boundary *	Mouth grid reference	Boundary grid reference
1. Waitaki River	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	J41 (Edition 1 1984):636837, 636835	J41 (Edition 1 1984):630844, 628837
2. Awamoa Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Beach Road bridge.	J41 (Edition 1 1984):47608, 476608	J41 (Edition 1 1984):475608, 476608
3. Kakanui River	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Kakanui Point Road bridge.	J42 (Edition 1 1984):449559, 448555	J42 (Edition 1 1984):443564, 445564
4. Orore Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Waianakarua Road bridge.	J42 (Edition 1 1984):437531, 437530	J42 (Edition 1 1984):436531, 437530
5. Bow Alley Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Waianakarua Road bridge.	J42 (Edition 1 1984):424503, 425504	J42 (Edition 1 1984):423505, 423506
6. Waianakarua River	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	J42 (Edition 1 1984):421482, 421484	J42 (Edition 1 1984):419483, 419484
7. Kurinui Creek a.k.a. Big Kuri Creek	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	J42 (Edition 1 1984):395403, 396404	J42 (Edition 1 1984):393404, 394405
8. Kuriiti Creek a.k.a. Little Kuri Creek	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	J42 (Edition 1 1984):394401, 394399	J42 (Edition 1 1984):393399, 393400
9. Waiwhero-whereo Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the footbridge.	J42 (Edition 1 1984):397375, 398375	J42 (Edition 1 1984):397374, 398374
10. “Kemp Road” Creek	The “mouth” where it enters the sea, the “boundary” at the lower limit of the lagoon.	J42 (Edition 1 1984):421330, 420330	J42 (Edition 1 1984):419322, 421323
11. Trotters Creek	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	J42 (Edition 1 1984):412325, 414327	J42 (Edition 1 1984):412325, 413326
12. Back Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the State Highway 1 Road bridge.	J42 (Edition 1 1984):404315, 405316	J42 (Edition 1 1984):404315, 405316
13. Tarapuke Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the State Highway 1 Road bridge.	J42 (Edition 1 1984):397305, 398306	J42 (Edition 1 1984):397305, 398306
14a. Shag River - northern arm	The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream.	J43 (Edition 1 1980):377240, 377239	J43 (Edition 1 1980):376238, 377237
14b. Shag River - southern arm	The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream.	J43 (Edition 1 1980):377231, 377230	J43 (Edition 1 1980):374 230, 375 229

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

Water body	Description of mouth and boundary *	Mouth grid reference	Boundary grid reference
15. Stony Creek	The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream.	J43 (Edition 1 1980):358200, 359201	J43 (Edition 1 1980):357201, 357200

* Taken from the NZMS 260 series of 1:50,000 scale maps.

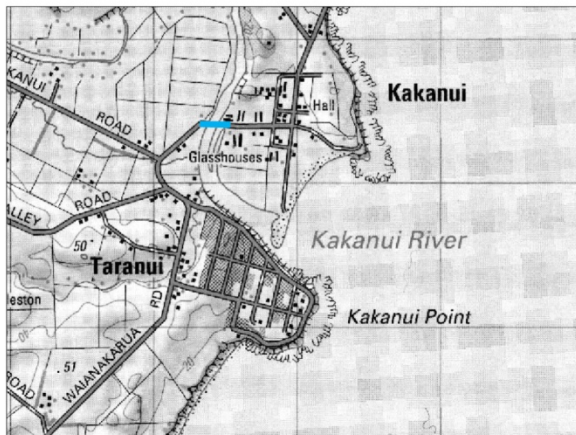
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



1 Waitaki River



2 Awamoa Creek



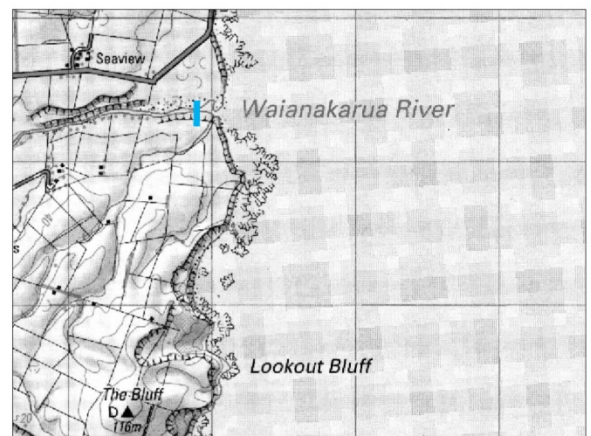
3 Kakanui River



4 Orore Creek

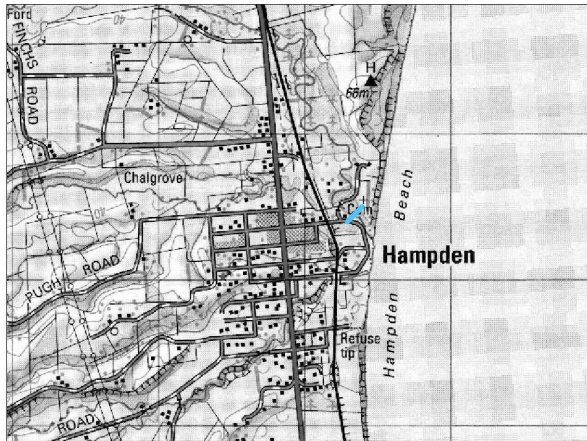


5 Bow Alley Creek

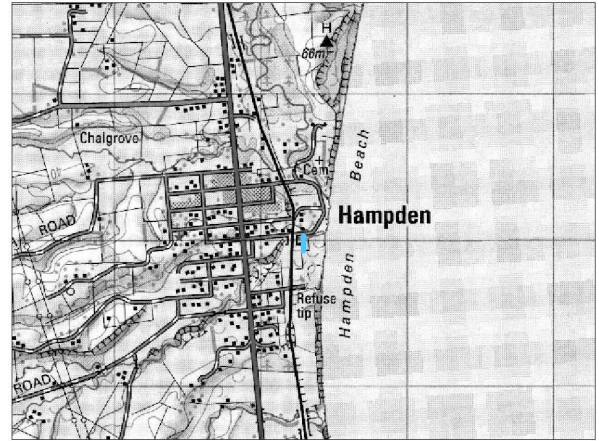


6 Waianakarua River

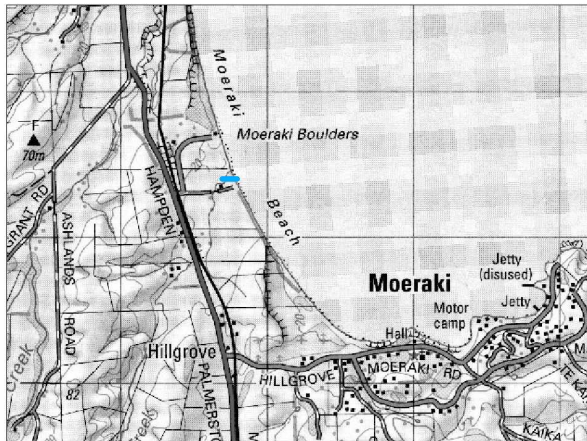
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



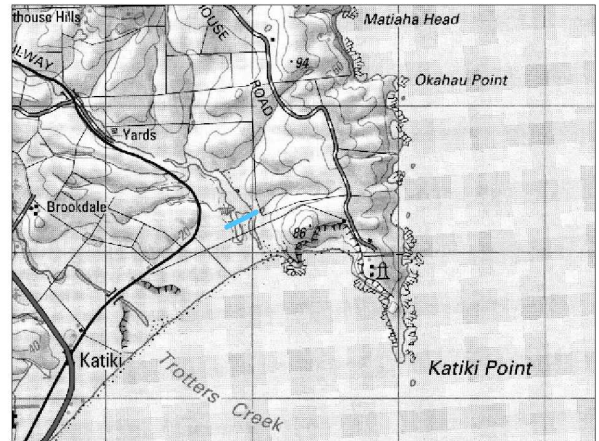
7 Kurinui Creek a.k.a. Big Kuri Creek



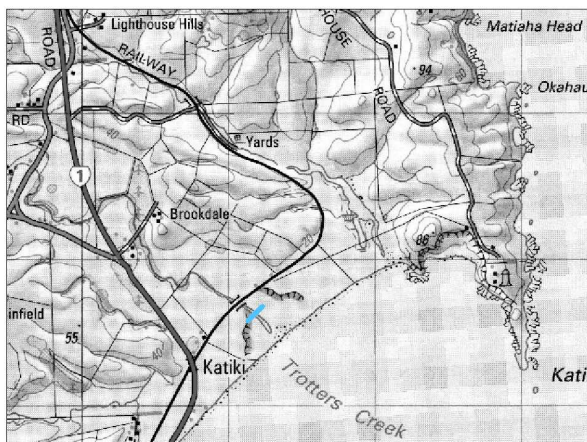
8 Kuriiti Creek a.k.a. Little Kuri Creek



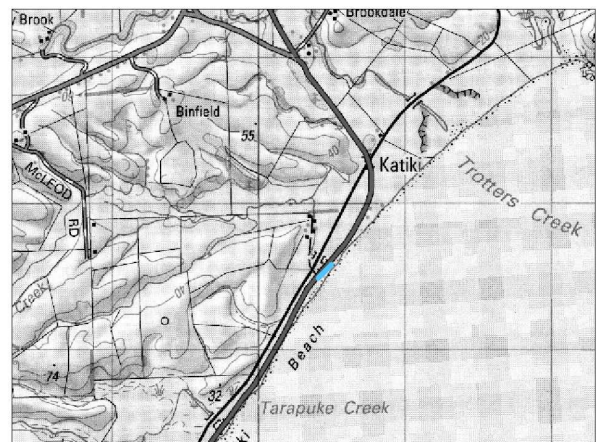
9 Waiherowhero Creek



10 "Kemp Road" Creek

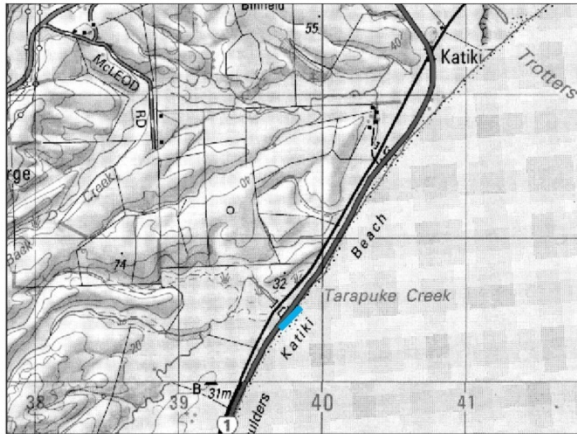


11 Troppers Creek

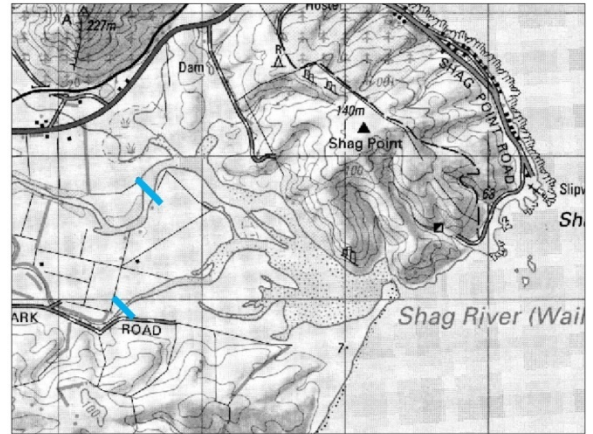


12 Back Creek

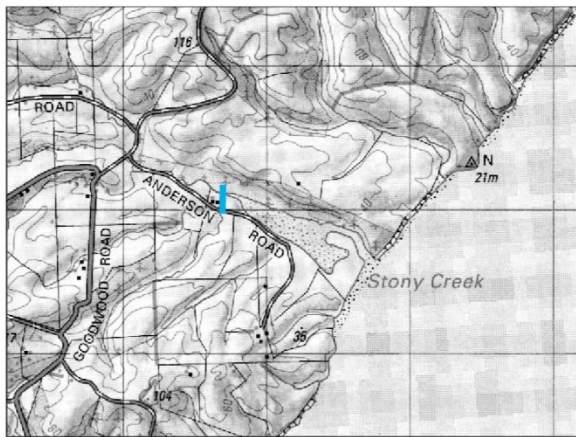
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



13 Tarapuke Creek



14 Shag River



15 Stony Creek

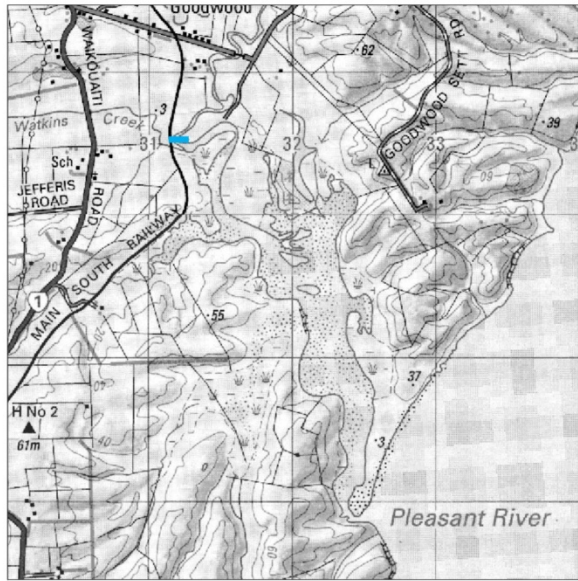
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

Dunedin City

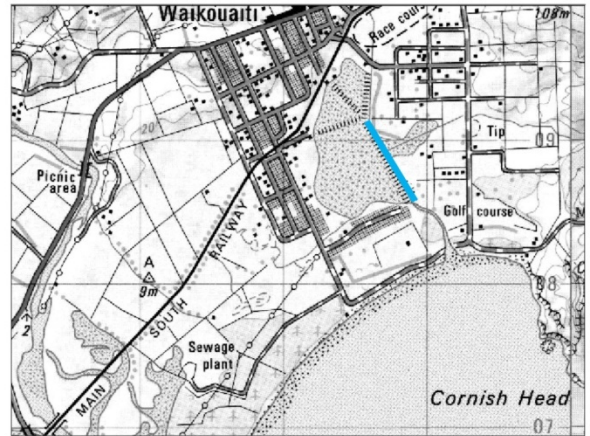
Water body	Description of mouth and boundary *	Mouth grid reference	Boundary grid reference
16. Pleasant River	The “mouth” where it enters the estuary, the “boundary” adjacent to the south end of the railway bridge.	J43 (Edition 1 1980):315156, 315157	J43 (Edition 1 1980):311155, 312155
17. Hawksbury Inlet	The “mouth” where it enters the sea, the “boundary” running along the causeway edge to include the Eastern arm in the coastal marine area.	I43 (Edition 1 1981):437531, 437530	I43 (Edition 1 1981):286091, 289086
18. Waikouaiti River	The “mouth” where it enters the estuary, the “boundary” at the downstream side of the State Highway 1 Road bridge.	I43 (Edition 1 1981):265085, 267085	I43 (Edition 1 1981):266087, 266089
19. Careys Creek	The “mouth” where it enters Blueskin Bay, the “boundary” adjacent to the northern end of the railway bridge.	I44/J44 (Edition 2 1987):208954, 209954	I44/J44 (Edition 2 1987):208956, 209956
20. Waitati River	The “mouth” where it enters Orokonui Inlet, the “boundary” five times the width of the mouth upstream.	I44/J44 (Edition 2 1987):216926, 21 925	I44/J44 (Edition 2 1987):214924, 215923
21. Drivers Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the metalled road bridge parallel to Long Beach.	I44/J44 (Edition 2 1987):269923, 270922	I44/J44 (Edition 2 1987):268921, 269920
22. Water of Leith	The “mouth” where it enters the sea, the “boundary” at the downstream side of the railway bridge.	I44/J44 (Edition 2 1987):178787, 179788	I44/J44 (Edition 2 1987):176789, 178789
23. ‘Marne Street’ Creek	The “mouth” where it enters Anderson’s Bay Inlet, the “boundary” at the downstream side of the Marne Street Road bridge.	I44/J44 (Edition 2 1987):179766, 180765	I44/J44 (Edition 2 1987):179766, 180765
24. Tomahawk Lagoon	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Tomahawk Road bridge.	I44/J44 (Edition 2 1987):189750, 191750	I44/J44 (Edition 2 1987):189751, 190751
25. Kaikorai Stream	The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream. The boundary around the estuary is mean high water spring.	I44/J44 (Edition 2 1987):082733, 082735	I44/J44 (Edition 2 1987):084736, 083737
26. Taylors Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Brighton Road bridge.	I44/J44 (Edition 2 1987):041708, 043709	I44/J44 (Edition 2 1987):039708, 040709
27. Otokia Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Brighton Road bridge.	I45 (Edition 1 1980):031701, 031699	I45 (Edition 1 1980):030699, 030700
28. Tutu Stream	The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 47.	I45 (Edition 1 1980):981652, 982654	I45 (Edition 1 1980):980652, 981654
29. Reids Stream	The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 48.	I45 (Edition 1 1980):966633, 967634	I45 (Edition 1 1980):966633, 967634
30. Unnamed	The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 49.	I45 (Edition 1 1980):954612, 955614	I45 (Edition 1 1980):954612, 955614

* Taken from the NZMS 260 series of 1:50,000 scale maps.

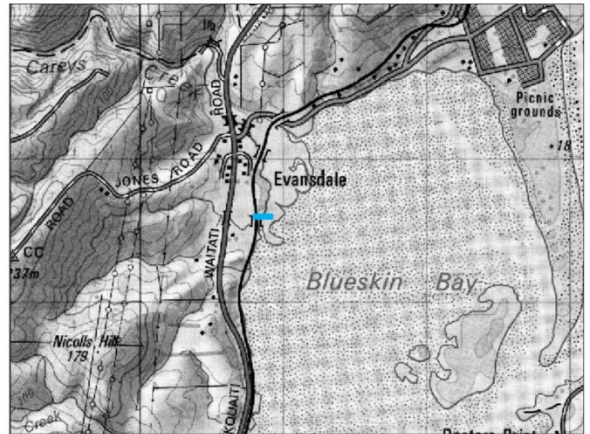
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



16 Pleasant River



17 Hawksbury Inlet



19 Careys Creek

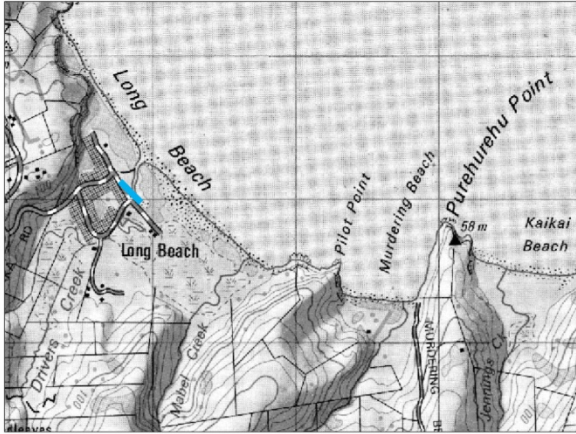


18 Waikouaiti River

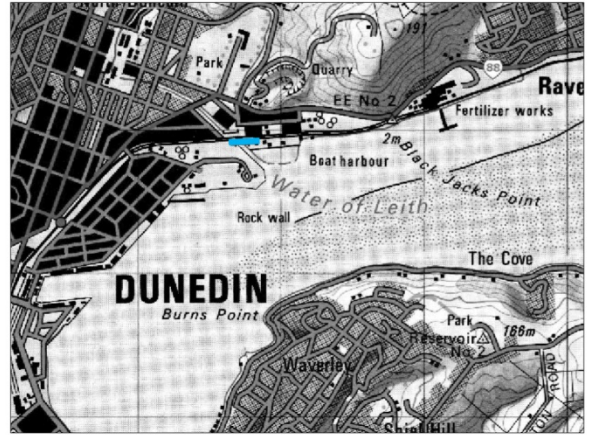


20 Waitati River

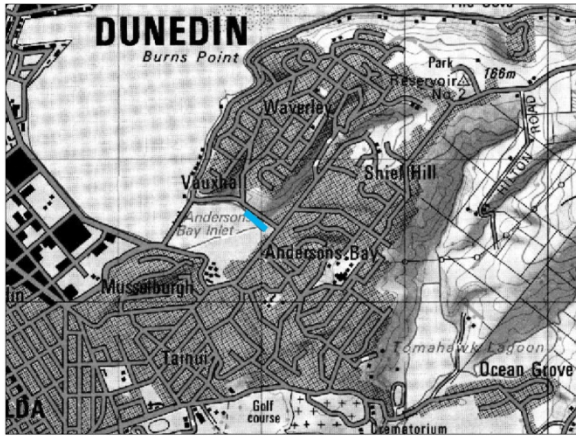
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



21 Drivers Creek



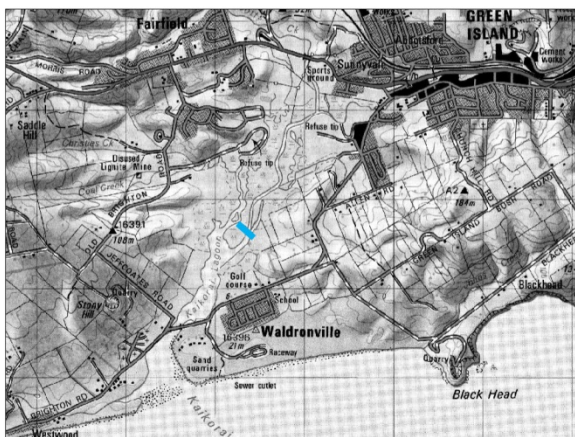
22 Water of Leith



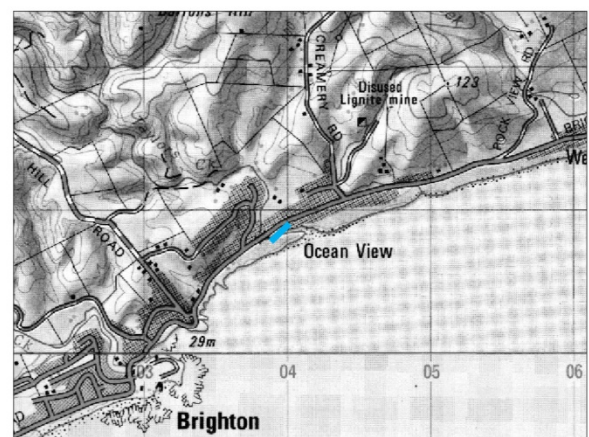
23 "Marne Street" Creek



24 Tomahawk Lagoon

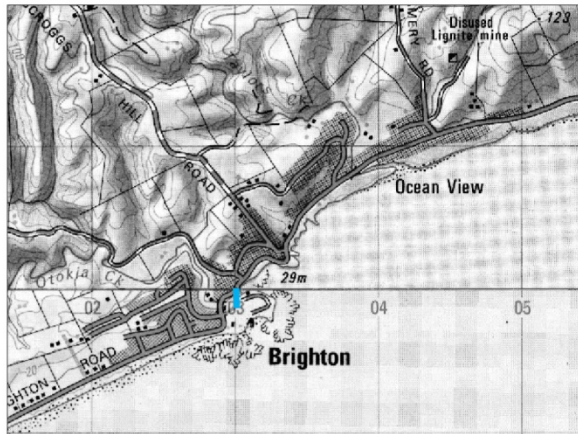


25 Kaikorai Stream



26 Taylors Creek

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



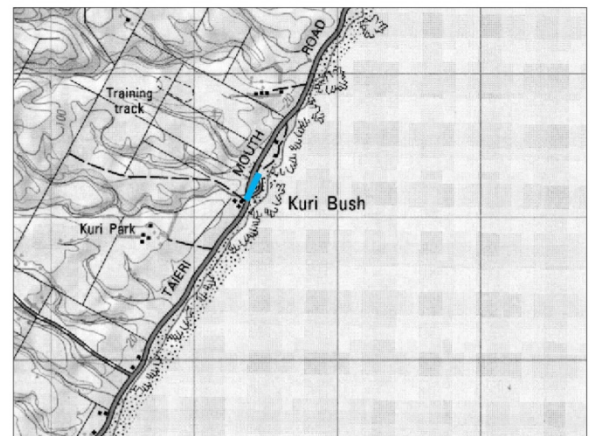
27 Otokia Creek



28 Tutu Stream



29 Reids Stream



30 Unnamed

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

Clutha District

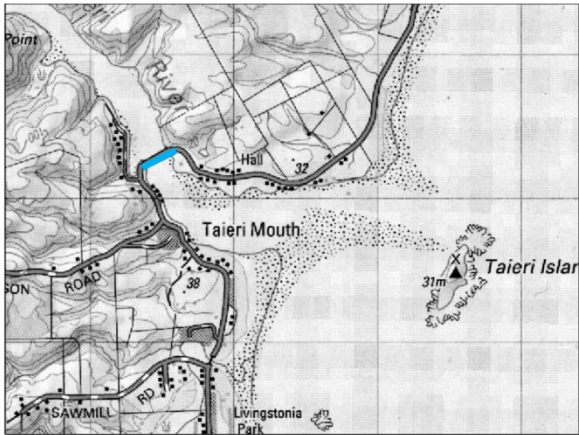
Water body	Description of mouth and boundary *	Mouth grid reference	Boundary grid reference
31. Taieri River	The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge at Taieri Mouth.	I45 (Edition 1 1980):930575, 936582	I45 (Edition 1 1980):923581, 925582
32. Duckbend Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the road Sawmill Road bridge.	I45 (Edition 1 1980):930570, 930568	I45 (Edition 1 1980):926567, 927569
33. Akatore Creek	The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream.	I45 (Edition 1 1980):905516, 906515	I45 (Edition 1 1980):904516, 905515
34. Bull Creek	The “mouth” where it enters the sea, the “boundary” at the picnic area.	H45 (Edition 1 1981):882439, 884440	H45 (Edition 1 1981):882439, 883441
35. Tokomairiro River	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	H45 (Edition 1 1981):882439, 884440	H45 (Edition 1 1981):882439, 883441
36. Wangaloa Creek	The “mouth” at the first constriction, the “boundary” at the second constriction.	H45 (Edition 1 1981):785357, 786356	H45 (Edition 1 1981):782353, 781354
37. Washpool Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Wangaloa Mouth Road bridge.	H46 (Edition 1 1981):752324, 754325	H46 (Edition 1 1981):751326, 752326
38. Clutha River/Mata-Au - Matau Branch	The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.	H46 (Edition 1 1981):665262, 668263	H46 (Edition 1 1981):660264, 660267
39. Clutha River/Mata-Au - Koau Branch	The “mouth” where it enters the sea, the “boundary” along the causeway and five times the width of the mouth upstream.	H46 (Edition 1 1981):639239, 641241	H46 (Edition 1 1981):639247, 642249, 640242, 639245
40. Karoro Creek	The “mouth” where it enters the sea, the “boundary” at the downstream side of the Kaka Point road bridge.	H46 (Edition 1 1981):623184, 624183	H46 (Edition 1 1981):621185, 623184
41. Nugget Stream	The “mouth” where it enters the sea, the “boundary” at the Nuggets Road bridge.	H46 (Edition 1 1981):635162, 636164	H46 (Edition 1 1981):634162, 635164
42. Owaka River	The “mouth” where it enters the Catlins River, the “boundary” at the downstream side of the Pounaweia bridge.	H46 (Edition 1 1981):552110, 554110	H46 (Edition 1 1981):551113, 553113
43. Catlins River	The “mouth” where it enters the Catlins ‘Lake’, the “boundary” at the downstream side of the Ratanui bridge.	G46 (Edition 1 1981):500495, 501493	G46 (Edition 1 1981):491082, 490083
44. Maclellan River	The “mouth” where it enters the Maclellan River, the “boundary” at the downstream side of the State Highway 92 Road bridge between Centre Road and Puaho Road.	G47 (Edition 1 1983):392011, 391013	G47 (Edition 1 1983):393013, 392015
45. Tahakopa River	The “mouth” where the Maclellan River enters, the “boundary” five times the width of the mouth upstream.	G47 (Edition 1 1983):390014, 390011	G47 (Edition 1 1983):385014, 385015
46. Fleming River	The “mouth” where it enters the Tautuku River, the “boundary” five times the width of the mouth upstream.	G47 (Edition 1 1983):346961, 347962	G47 (Edition 1 1983):346962, 347963

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

Water body	Description of mouth and boundary *	Mouth grid reference	Boundary grid reference
47. Tautuku River	The “mouth” where the Fleming River enters, the “boundary” at the constriction upstream.	G47 (Edition 1 1983):346962, 347961	G47 (Edition 1 1983):345960, 346961
48. Hukihuki Creek	The “mouth” where it enters the Waipati estuary, the “boundary” five times the width of the mouth upstream.	G47 (Edition 1 1983):291927, 292926	G47 (Edition 1 1983):293928, 294927
49. Waipati River	The “mouth” where it enters Waipati estuary, the “boundary” five times the width of the mouth upstream.	G47 (Edition 1 1983):284925, 294924	G47 (Edition 1 1983):281924, 291924

* Taken from the NZMS 260 series of 1:50,000 scale maps.

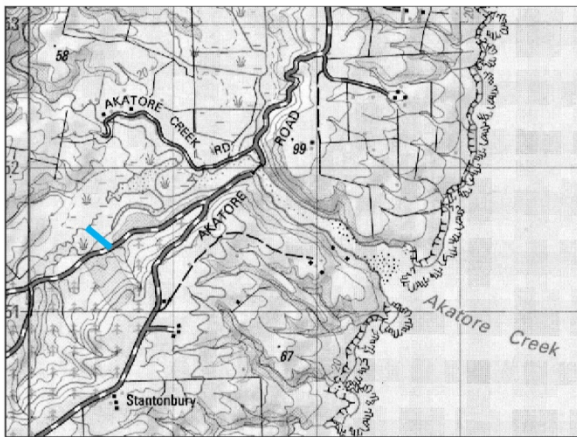
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



31 Taieri River



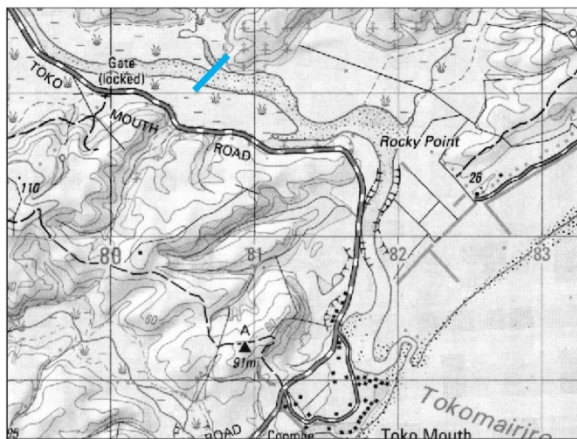
32 "Sawmill Road" Creek



33 Akatore Creek



34 Bull Creek

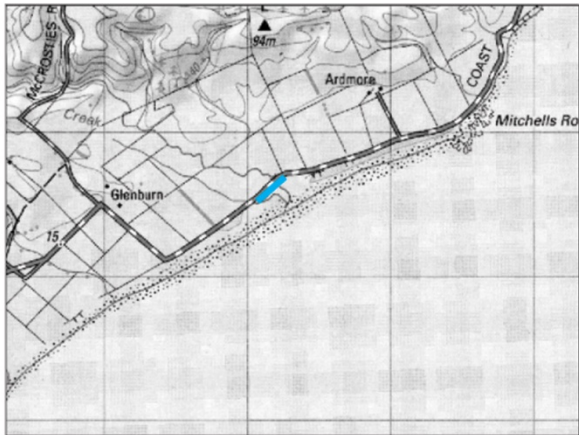


35 Tokomairiro Stream

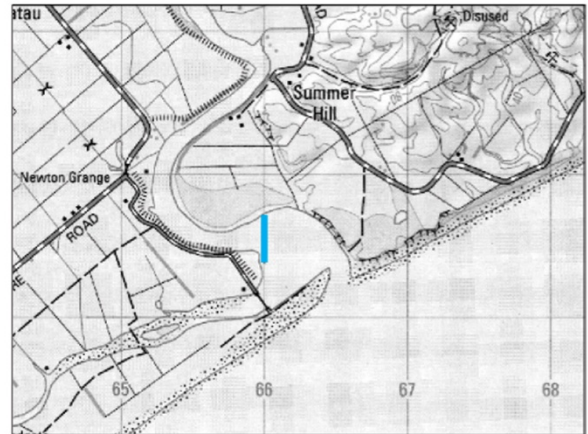


36 Wangaloa Creek

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



37 Washpool Creek



38 Clutha River/Mata-Au – Matau Branch



39 Clutha River/Mata-Au – Koau Branch



40 Karoro Creek

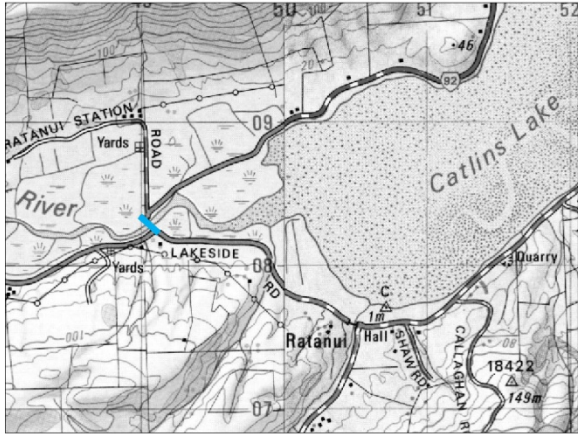


41 Nugget Stream



42 Owaka River

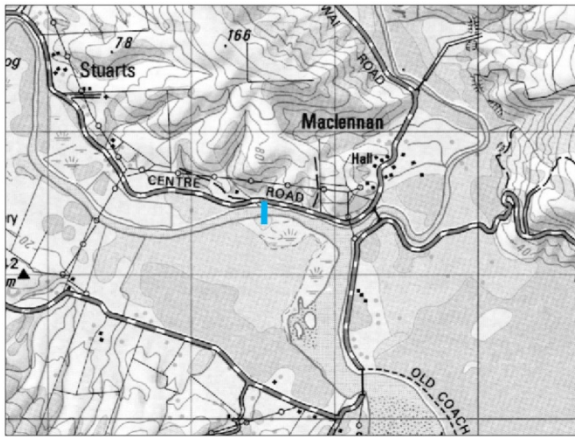
SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



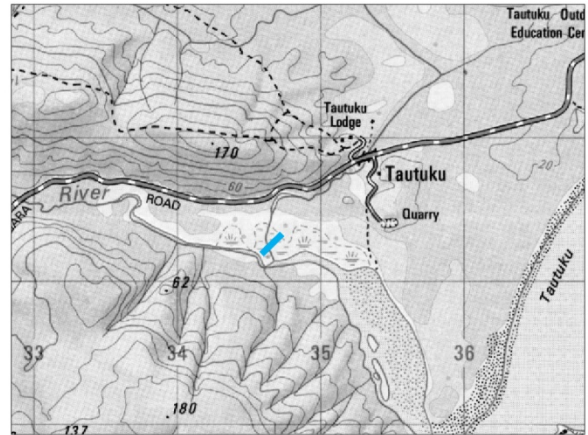
43 Catlins River



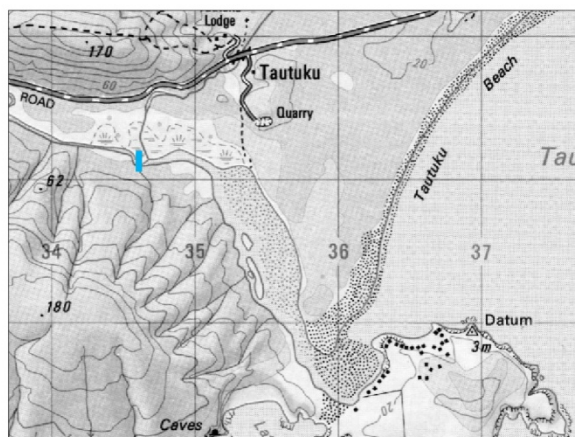
44 Macleannan River



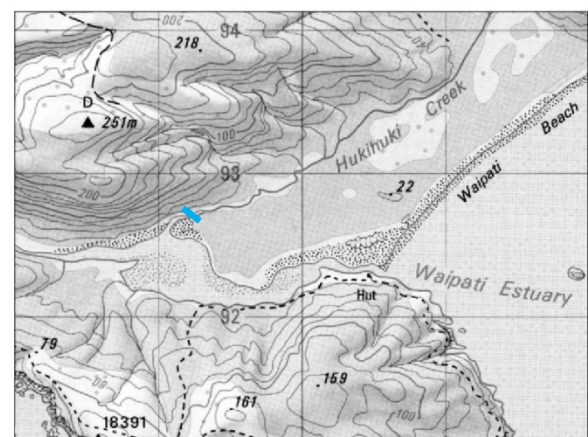
45 Tahakopa River



46 Fleming River

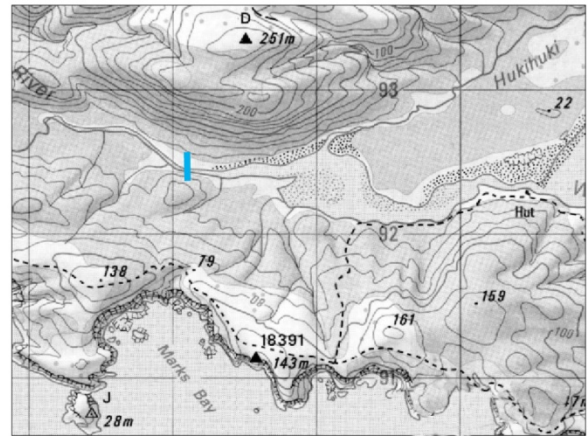


47 Tautuku River



48 Hukihuki Creek

SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



49 Waipati River

13 Schedule of transitional provisions repealed by this Regional Plan: Water

The Otago Regional Council had an existing Regional Plan for Otago (commonly referred to as the Transitional Regional Plan), constituted by Section 368 of the Resource Management Act 1991. The Transitional Regional Plan was made up of notices, authorisations, bylaws, determinations, and resolutions in operation at the time of the enactment of the Resource Management Act (1 October 1991). These instruments were deemed to form rules in the Transitional Regional Plan, some of which related to the management of Otago’s water bodies.

This Plan deletes the provisions of the Transitional Regional Plan relating to water management within Otago, as identified in this schedule.

Repealed provision of Transitional Regional Plan	Regional Plan: Water provision replacing
Local Water Conservation (Lake Tuakitoto) Notice 1991: 3 “Regionally Significant Features”	Schedule 1A; Schedule 9.
Local Water Conservation (Lake Tuakitoto) Notice 1991: 4 “Minimum Lake Level”	Policy 6.5.1; Rules 12.1.1.1 and 12.3.1.4.
Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(1) “Water Rights and General Authorisations”	Policy 5.4.2.
Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(2) “Water Rights and General Authorisations”	No equivalent provision.
Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(3) “Water Rights and General Authorisations”	No equivalent provision.
Local Water Conservation (Lake Tuakitoto) Notice 1991: 6 “Limit of Notice”	Rule 12.1.2.1; covered by Section 14(3) of the Resource Management Act 1991.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 3 “Regionally Significant Features”	Schedule 1A.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 4 “Right to dam not to be granted”	Rule 12.3.1.3; Schedule 6.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 “Water Rights (General):-(1)”	Policy 5.4.2.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 “Water Rights (General):-(2)”	No equivalent provision.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 “Water Rights (General):-(3)”	No equivalent provision.
Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 6 “Limit of Notice”	Rule 12.1.2.1; covered by Section 14(3) of the Resource Management Act 1991.
Record of Determination of Appeal: Kakanui River minimum flow 4 September 1991	Schedule 2; Policies 6.4.2 and 6.4.3; Rule 12.1.4.3.
Otago Catchment Board and Regional Water Board, General Authorisations 1988:	
General Authorisation 1: “Minor Agricultural Uses”	Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.
General Authorisation 2: “Irrigation Scheme Distribution”	Rules 12.1.4.1, 12.2.2.2, 12.11.2.1 and 12.11.2.3.

SCHEDULE 13: TRANSITIONAL PROVISIONS REPEALED

Repealed provision of Transitional Regional Plan	Regional Plan: Water provision replacing
General Authorisation 3: “School Supply”	Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.
General Authorisation 4: “Spray Mixing”	Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.
General Authorisation 5: “Earthworks”	Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.
General Authorisation 6: “Septic Tank Effluent”	Rules 12.6.1.3 and 12.6.1.4.
General Authorisation 7: “Tracer Dye Discharge”	Rule 12.11.3.1.
General Authorisation 8: “Swimming Pool Discharge”	Rule 12.11.2.1.
General Authorisation 9: “Prospecting and Casual Mining”	Rules 12.1.2.2 to 12.1.2.5, 12.2.2.2, and 12.11.2.3.
General Authorisation 10: “Stormwater/ Drainage Discharges”	Rules 12.1.2.6, 12.3.2.2, 12.4.1.1, 12.4.1.2 and 12.5.1.1.
General Authorisation 11: “Herbicides”	Rules 12.7.1.1 to 12.7.1.4.
General Authorisation 12: “Drilling”	Rules 12.1.2.2 to 12.1.2.5, 12.2.2.2, 12.2.2.3 and 12.9.1.1.
General Authorisation 13: “Minor Dams”	Rule 12.3.2.1.
General Authorisation 14: “Farm Wastes Disposal”	Rules 12.8.1.2 to 12.8.1.4.
General Authorisation 15: “Incidental Damming and Diversion”	Rules 12.3.2.1 and 12.3.2.3.
General Authorisation 16: “Land Stability Drainage”	Rules 12.1.2.6, 12.3.2.2, 12.5.1.1 and 12.11.2.3.
Otago Catchment Board and Regional Water Board, Bylaw 1988:	
Clause 1, “General”, except as it relates to Section 3	No equivalent provision
Clause 2.1, “Maintenance of watercourses and defences against water”	No equivalent provision
Clause 2.2, “Crossings”	Rules under 13.1 to 13.3, 13.5 (as it applies to the bed of a lake or river); Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.
Clause 2.3, “Alteration to Watercourse”	Rules under 13.4 and 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision.
Clause 2.4, “Construction of a defence against water”	Rules under 13.2 and 13.3 (as it applies to the bed of a lake or river); Rules under 14.3 (as it applies to land outside of the bed of a lake or river).
Clause 2.5, “Removal of shingle, sand, or other material”	Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision.
Clause 2.6, “Vegetation”	Rules under 13.6 (as it applies to the bed of a lake or river), otherwise no equivalent provision.
Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.1	Rules under 12.3; and 13.1 to 13.6, (as it applies to the bed of a lake or river), otherwise no equivalent provision; Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.
Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.2	Rules under 13.2 (as it applies to the bed of a lake or river); Rules under 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top

SCHEDULE 13: TRANSITIONAL PROVISIONS REPEALED

Repealed provision of Transitional Regional Plan	Regional Plan: Water provision replacing
	of the bank of any river), otherwise no equivalent provision.
Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.3	Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision; Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.
Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.4	Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision; Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.
Clause 2.8, “Access, damage etc.”	No equivalent provision.
Clause 4, “Dams”: 4.1, “Construction and alteration”	Rules under 12.3, 13.2 and 13.3.
Clause 4, “Dams”: 4.2, “Maintenance and removal”	Rules under 13.3 and 13.4.
Clause 5, “Underground water”: 5.1 to 5.7	Rules under 12.2 and 14.1.
Clause 5, “Underground water”: 5.8, “Control of pile driving, dredging etc”	As it applies to the bed of a lake or river, Rules under 13.5. Rules under 14.2.
Clause 5, “Underground water”: 5.9, “Pollution of underground water”: 5.9.1	Rules under 12.4 to 12.13.
Clause 5, “Underground water”: 5.9, “Pollution of underground water”: 5.9.2	Rules under 14.1 and 14.2.
First Schedule	No equivalent provision.
Second Schedule	No equivalent provision.
Fifth Schedule	No equivalent provision.
Sixth Schedule	No equivalent provision.
Eighth Schedule	No equivalent provision.
Waitaki Catchment Board and Regional Water Board, Bylaw Confirming Resolution, Hilderthorpe Floodway Bylaw 1988	
Clauses 1 to 10	No equivalent provision
Taieri River Trust Bylaw No.1 1960	
Clauses 1 to 30	No equivalent provision

SCHEDULE 14: [REPEALED]

14 *[Repealed – 1 March 2012]*

15 Schedule of characteristics and numerical limits and targets for good quality water in Otago lakes and rivers

Table 15.1 Characteristics indicative of good quality water

Characteristic	Description	Contaminant effect
Clarity	When standing in knee-deep water, the bed is easily and clearly seen.	Sediment reduces the clarity of water, and has an adverse effect on freshwater fish and invertebrate habitat.
Colour	Water-colour is not altered by contamination. Some rivers have natural colour such as tannin-stain.	A change in colour can be indicative of contamination by sediment or organic matter, linked to potentially high concentrations of DRP, NNN, ammoniacal nitrogen or <i>E coli</i> .
Sediment	Riffles and runs are free of obvious clay and silt deposits. Walking across a riffle or run should not produce an obvious plume. Some rivers are naturally high in sediment.	Sediment affects the colour of water, and has an adverse effect on freshwater fish and invertebrate habitat, and can result in high concentrations of phosphorus, and allow <i>E coli</i> to persist.
Smell	Water is odourless.	Smell can be indicative of contamination from a source high in ammoniacal nitrogen or <i>E coli</i> or the decay of excessive amounts of algae which limits people's opportunity to appreciate water.
Algae	Filamentous algae in rivers should cover less than 30% of the river bed. Floating algae occurring in lakes and rivers should not reduce water clarity. Algal growth in rivers or lakes should not cause slime on the surface of the water.	Excessive nitrogen and phosphorus contribute to algal growth which has an adverse effect on freshwater fish and invertebrate habitat, amenity and recreation values, and angling opportunities.
Bank appearance	Functioning riparian margins: <ul style="list-style-type: none"> ▪ Vegetation is healthy. ▪ Banks are stable. ▪ No obvious livestock disturbance. 	Healthy riparian margins mitigate sediment and nutrient discharges, and provide habitat for invertebrates.

SCHEDULE 15: GOOD QUALITY WATER

Table 15.2 Receiving water numerical limits and targets for achieving good quality water

The limits for Groups 1, 2 and 3 are achieved when 80% of samples collected at a site, when flows are at or below median flow, over a rolling 5-year period, meet or are better than the limits in Schedule 15.

A target date of 31 March 2025 is set when the contaminant concentration does not meet the limit as at 31 March 2012.

Table 15.2.1: Receiving Water Group 1

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>	Turbidity
	0.444 mg/l	0.026 mg/l	0.1 mg/l	260 cfu/100 ml	5 NTU
Catlins	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2025
Careys Creek	31 March 2012				
Kaikorai	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Leith	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Mokoreta (within Otago)	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Owaka	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Pomahaka , downstream of Glenken	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Tahakopa	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2025
Tokomairiro	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Tuapeka	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waitahuna	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Waitati	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Waiwera	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Any unlisted tributary on the true right bank of the Clutha/Mata-Au , south of Judge Creek	31 March 2012				
Any unlisted tributary on the true left bank of the Clutha/Mata-Au , south of the Tuapeka catchment					
Any unlisted catchment that discharges to the coast , south of Taieri Mouth					

SCHEDULE 15: GOOD QUALITY WATER

Table 15.2.2: Receiving Water Group 2

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>	Turbidity
	0.075 mg/l	0.01 mg/l	0.1 mg/l	260 cfu/100 ml	5 NTU
Cardrona	31 March 2012				
Clutha/Mata-Au and any unlisted tributary (Luggate to mouth, including Lake Roxburgh, and excluding tributaries described in Group 1)	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2025
Fraser	31 March 2012				
Kakanui	31 March 2025	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Kawarau downstream of the Shotover confluence	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Lake Dunstan	31 March 2012				
Lindis	31 March 2025	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Luggate	31 March 2012				
Manuherikia	31 March 2012	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Mill Creek (tributary to Lake Hayes)	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Pomahaka , upstream of Glenken	31 March 2012				
Shag	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Shotover	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Taieri	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Trotters	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waianakarua	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waikouaiti	31 March 2012				
Waipori	31 March 2012				
Waitaki tributaries within Otago	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Any unlisted catchment that discharges to the coast, north of Taieri Mouth	31 March 2012				

SCHEDULE 15: GOOD QUALITY WATER

Table 15.2.3: Receiving Water Group 3

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>	Turbidity
	0.075 mg/l	0.005 mg/l	0.01 mg/l	50 cfu/100 ml	3 NTU
Clutha/Mata-Au, above Luggate	31 March 2012				
Dart	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Kawarau, upstream of the Shotover confluence	31 March 2012				
Matukituki	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Tributaries to Lakes Hawea, Wakatipu, & Wanaka	31 March 2012				

The limits for Groups 4 and 5 are achieved when 80% of samples collected at a site, over a rolling 5-year period, meet or are better than the limits in Schedule 15.

A target date of 31 March 2025 is set when the contaminant concentration does not meet the limit as at 31 March 2012.

Table 15.2.4: Receiving Water Group 4

	Total nitrogen	Total phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>	Turbidity
	0.55 mg/l	0.033 mg/l	0.1 mg/l	126 cfu/100 ml	5 NTU
Lake Hayes	31 March 2012	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Johnson	31 March 2025	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Onslow	31 March 2012	31 March 2025	31 March 2012	31 March 2012	31 March 2025
Lake Tuakitoto	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Lake Waipori & Waiholā	31 March 2025	31 March 2025	31 March 2012	31 March 2012	31 March 2025

Table 15.2.5: Receiving Water Group 5

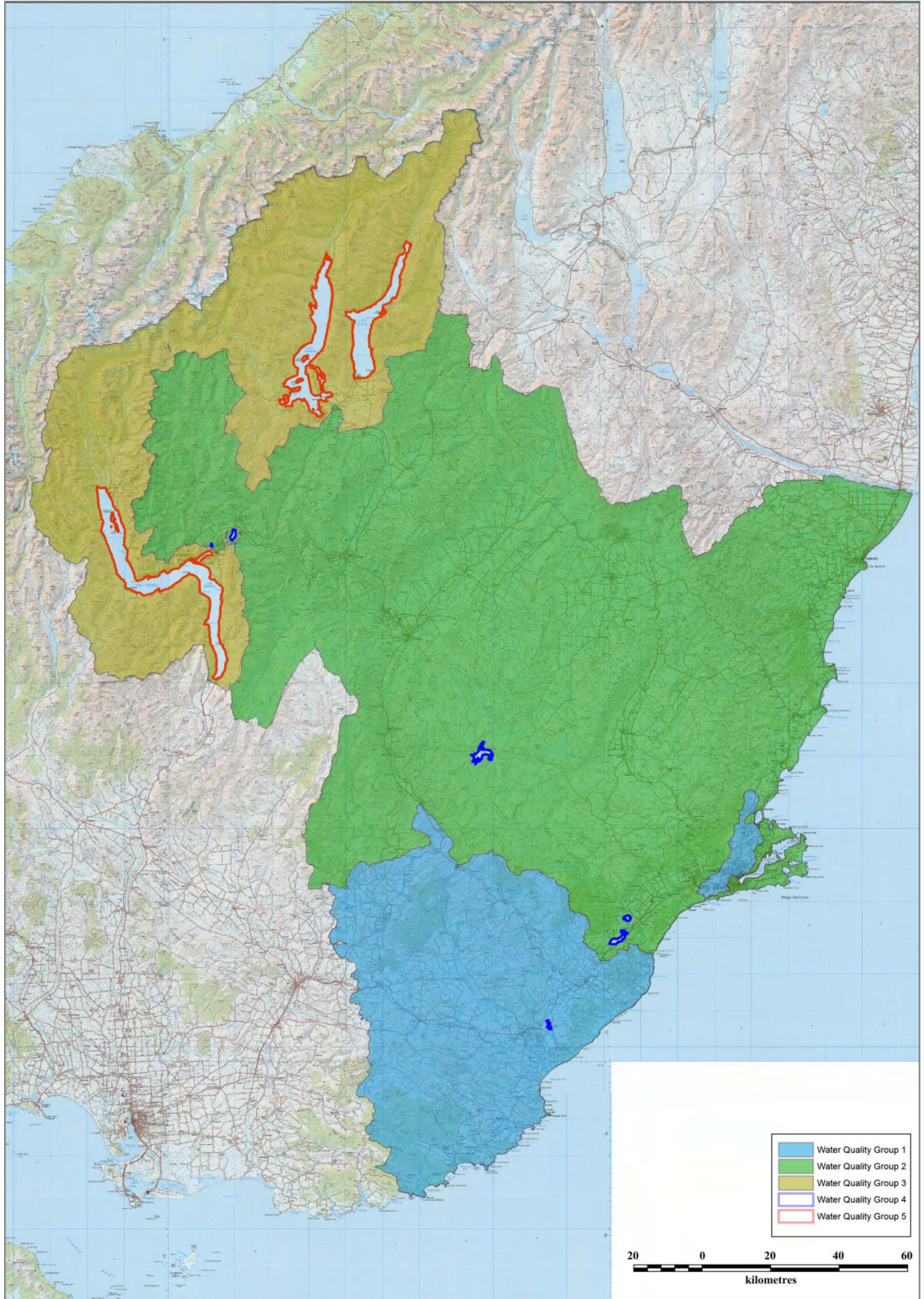
	Total Nitrogen	Total Phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i> ³	Turbidity
	0.1 mg/l	0.005mg/l	0.01 mg/l	10 cfu/100 ml	3 NTU
Lake Hawea	31 March 2012				
Lake Wakatipu	31 March 2012	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Wanaka	31 March 2012				

mg/l = milligrams per litre

cfu/100 ml = colony-forming units per 100 millilitres

NTU = nephelometric turbidity units

Map 15.1 Receiving Water Groups



SCHEDULE 15: GOOD QUALITY WATER

Table 15.3 Aquifer Concentration Limits

Aquifer/Zone	Aquifer N concentration limit (mg/l)	Reason for Limit
*	*	*

* To be populated following aquifer studies

16 Schedule of permitted activity discharge thresholds for water quality

Schedule 16 describes the thresholds that apply to discharges permitted under Rule 12.C.1.1A in the catchments of each discharge threshold area. Discharge Threshold Areas 1 and 2 catchments are shown on the J-series Maps.

16A Permitted activity discharge thresholds for water quality by discharge threshold area

Discharge Threshold Area 1 Catchments	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>
Timeframe	1 April 2026			
<ul style="list-style-type: none"> ▪ Catlins ▪ Careys Creek ▪ Kaikorai ▪ Leith ▪ Mokoreta (within Otago) ▪ Owaka ▪ Pomahaka, downstream of Glenken ▪ Tahakopa ▪ Tokomairiro ▪ Tuapeka ▪ Waitahuna ▪ Waitati ▪ Waiwera ▪ Any unlisted tributary on the true right bank of the Clutha/Mata-Au, south of Judge Creek ▪ Any unlisted tributary on the true left bank of the Clutha/Mata-Au, south of the Tuapeka ▪ Any unlisted catchment that discharges to the coast, south of Taieri Mouth 	3.6 mg/l	0.045 mg/l	0.2 mg/l	550 cfu/100 ml

SCHEDULE 16: DISCHARGE THRESHOLDS

Discharge Threshold Area 2 Catchments	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	<i>Escherichia coli</i>
Timeframe	1 April 2026			
<ul style="list-style-type: none"> ▪ Cardrona ▪ Clutha/Mata-Au (above Luggate) ▪ Clutha/Mata-Au and any unlisted tributary (Luggate to mouth, including Lake Roxburgh, and excluding tributaries described in Discharge Threshold Catchment Area 1) ▪ Fraser ▪ Kakanui ▪ Kawarau ▪ Lake Dunstan ▪ Lake Hayes ▪ Lake Hawea and any tributary ▪ Lake Johnson ▪ Lake Onslow ▪ Lake Tuakitoto ▪ Lake Waipori & Waihola ▪ Lake Wakatipu and any tributary ▪ Lake Wanaka and any tributary ▪ Lindis ▪ Luggate ▪ Manuherikia ▪ Mill Creek (tributary to Lake Hayes) ▪ Pomahaka, upstream of Glenken ▪ Shag ▪ Shotover ▪ Taieri ▪ Trotters ▪ Waianakarua ▪ Waikouaiti ▪ Waipori ▪ Waitaki tributaries within Otago ▪ Any unlisted catchment that discharges to the coast, north of Taieri Mouth 	1.0 mg/l	0.035 mg/l	0.2 mg/l	550 cfu/100 ml

mg/l = milligrams per litre

cfu/100 ml = colony-forming units per 100 millilitres

16B Representative flow monitoring sites and reference flows

Map 16B Representative flow monitoring sites for every part of Otago
 Representative flow monitoring sites are shown on the Water Info website (<http://water.org.govt.nz/WaterInfo/Default.aspx>).

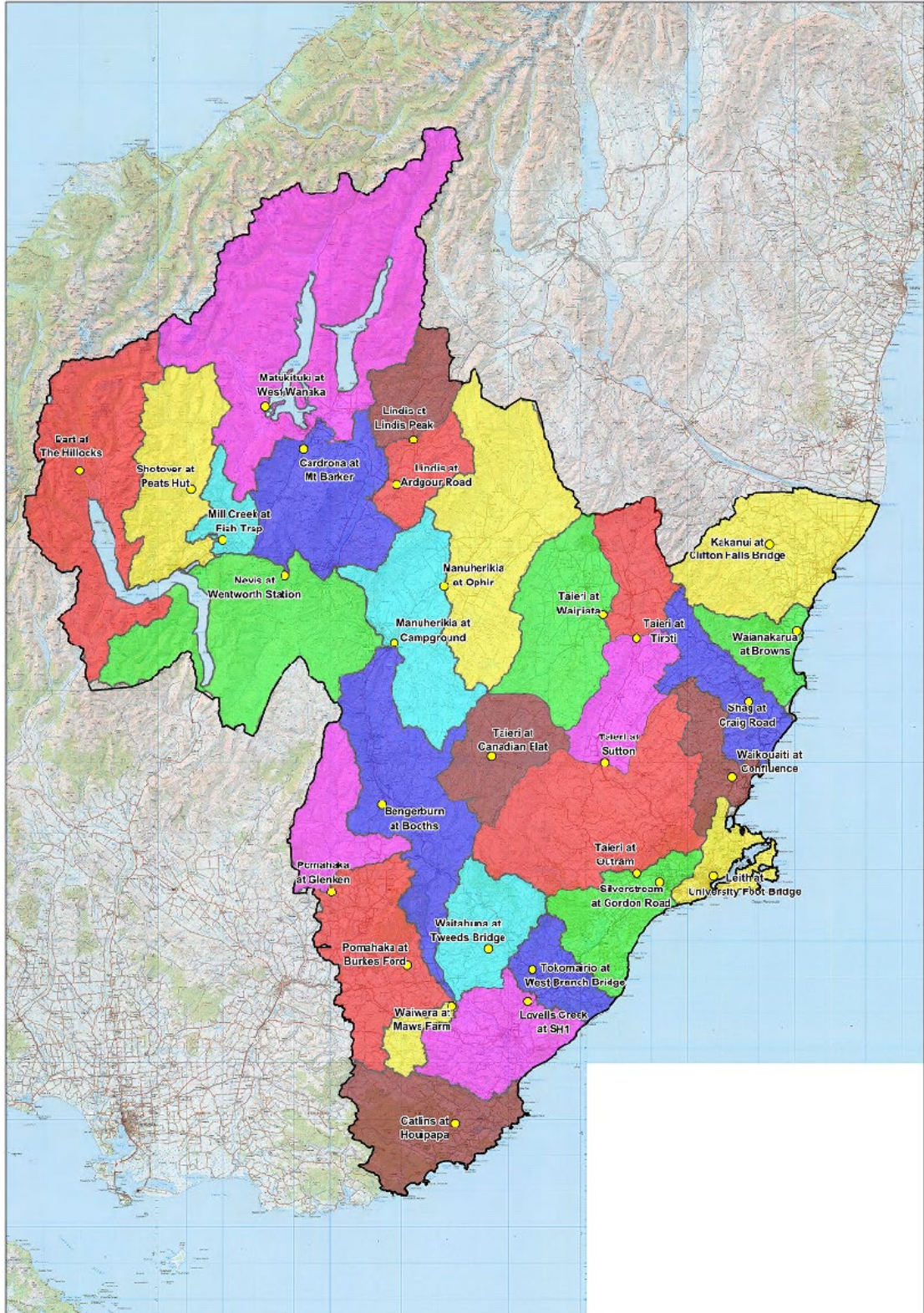


Table 16B Reference flows at each representative flow monitoring site

Reference flows are fixed and have been calculated using median flow data from 01/01/2007 to 01/01/2013. River flows for Otago are available on the Water Info website (<http://water.orc.govt.nz/WaterInfo/Default.aspx>).

Monitoring Flow Site	Reference flow (cumecs)
Bengerburn at Booths	0.37
Cardrona at Mt Barker	1.95
Catlins at Houipapa	2.34
Dart at The Hillocks	51.49
Kakanui at Clifton Falls Bridge	1.29
Leith at University Foot Bridge	0.34
Lindis at Ardgour Road	3.50
Lindis at Lindis Peak	3.51
Lovells Creek at SH1	0.14
Manuherikia at Campground	11.60
Manuherikia at Ophir	8.01
Matukituki at West Wanaka	44.99
Mill Creek at Fish Trap	0.35
Nevis at Wentworth Station	7.25
Pomahaka at Burkes Ford	15.48
Pomahaka at Glenken	7.00
Shag at Craig Road	0.65
Shotover at Peats	18.12
Silverstream at Gordon Road	0.30
Taieri at Canadian Flat	2.45
Taieri at Outram	15.86
Taieri at Sutton	10.52
Taieri at Tiroiti	7.88
Taieri at Waipiata	6.02
Tokomairiro at West Branch Bridge	0.44
Waiakarua at Browns	0.78
Waikouaiti at Confluence	1.34
Waitahuna at Tweeds Bridge	1.55
Waiwera at Maws Farm	1.58

17 Schedule of rules applying to plantation forestry in Otago

The Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017 (NES-PF) came into effect on 1 May 2018. The regulation set out rules for core plantation forestry activities and apply to any forest larger than one hectare, planted specifically for commercial activities and harvest. In general, the standards prevail over rules in regional and district plans, however, in some cases stricter rules in this Plan may apply.

The standards are online here:

<http://www.legislation.govt.nz/regulation/public/2017/0174/latest/whole.html>¹

In this Plan, stricter rules apply that give effect to Objective A1 of the National Policy Statement for Freshwater Management: *To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the use and development of land, and of discharges of contaminants.*

Stricter Water Plan rules are applied:

- In accordance with Regulation 6 of the NES-PF;
- To achieve Objective 7.A.2 in the Water Plan, in accordance with Policy 7.B.2 in the Water Plan; and
- In particular, to protect indigenous non-migratory fish such as galaxiid species, which are classified as threatened and are particularly vulnerable to habitat disturbance and sedimentation.

For this reason, some rules in sections 12.C and 13.5 of this Plan prevail over the NES-PF in accordance with Section 43A(1) of the RMA.

A summary of the rules that apply to plantation forestry in Otago is in Table 17.1 below.

¹ Link to *Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017*, retrieved 29 March 2018.

Table 17.1 Rules for Plantation Forestry in Otago

National Environmental Standards for Plantation Forestry (Part 2)	Regional Plan: Water for Otago
<p>Subpart 1 – Afforestation All regulations apply</p>	<p>Not applicable.</p>
<p>Subpart 8 – Replanting All regulations apply</p>	
<p>Subpart 2 – Pruning and thinning to waste All regulations apply</p>	<p>Chapter 12: Rules Water Take, Use & Management</p> <p>12.C Other discharges</p> <p>12.C.1 Permitted activities: No resource consent required</p> <p>12.C.1.1 (d) (e) (f), excluding (iii)</p> <p>12.C.2 Restricted discretionary activities: Resource consent required</p> <p>12.C.2.1</p> <p>12.C.2.2</p> <p>12.C.2.4</p> <p>12.C.3 Discretionary activities: Resource consent required</p> <p>12.C.3.2</p>
<p>Subpart 3 – Earthworks All regulations apply, except 26 replaced (see opposite and 13.5 rules below in relation to ephemeral rivers)</p>	
<p>Subpart 5 – Forest quarrying All regulations apply, except 56 (1) replaced (see opposite)</p>	
<p>Subpart 6 – Harvesting All regulations apply, except 65 replaced (see opposite).</p>	
<p>Subpart 7 – Mechanical land preparation All regulations apply, except 74 (6) replaced (see opposite)</p>	
<p>Subpart 9 – Ancillary activities All regulations apply, except 90 replaced (see opposite)</p>	

Table continues next page.

Table 17.1 Rules for Plantation Forestry in Otago *continued*

National Environmental Standards for Plantation Forestry (Part 2)	Regional Plan: Water for Otago
<p>Subpart 3 – Earthworks</p> <p>All regulations apply (except 26 replaced, see above). In addition to 28(2), 13.5.3.1 rule opposite also applies for ephemeral flow paths.</p>	<p>Chapter 13: Rules: Land Use on Lake or River Beds or Regionally Significant Wetlands</p> <p>13.5 Alteration of the bed of a lake or river, or of a Regionally Significant Wetland</p> <p>13.5.1 Permitted activities: No resource consent required.</p> <p>13.5.1.1 (g)</p> <p>13.5.3 Discretionary activities: Resource consent required</p> <p>13.5.3.1</p>
<p>Subpart 4 – River Crossings</p> <p>All regulations apply. In addition to 44, 13.5.1.1(g) rule opposite applies, if this rule cannot be met then 13.5.3.1 applies.</p>	
<p>Subpart 6 – Harvesting</p> <p>All regulations apply. In addition to 68(3), rule 13.5.3.1 opposite applies if logs are to be dragged through streams less than 3 metres wide.</p>	
<p>Subpart 9 – Ancillary activities</p> <p>All regulations apply. In addition to 89, 13.5.1.1(g) rule opposite applies, if this rule cannot be met then 13.5.3.1 applies.</p>	
<p>Subpart 10 – General provisions</p> <p>All regulations apply. In addition to 97, rule 13.5.3.1 opposite also applies to any bed disturbance outside fish spawning seasons as defined by the Fish Spawning Indicator.²</p>	

² This is an online mapping tool developed by the Ministry for Primary Industries, which can be found on its website: <https://www.mpi.govt.nz/growing-and-harvesting/forestry/national-environmental-standards-for-plantation-forestry/fish-spawning-indicator/>

18. Schedule of effluent pond drop test requirements and criteria

Part B:
Animal
waste
storage and
application

This schedule outlines the requirements for undertaking pond drop tests on storage ponds that are part of an animal waste system and the pass criteria for drop test results.

Requirements

- Testing is undertaken over a minimum period of 48 hours.
- Testing recording equipment is to be accurate to 0.8 mm or less.
- Continuous readings are to be taken over the entire test period at not more than 10 second intervals.
- Any change in pond fluid level over the test period needs to be accounted for.
- Ponds must be at or over 75% design depth before a test can be undertaken.
- The pond has been de-sludged in the 12 months prior to the test being undertaken and there is no sludge or crust on the pond surface during the test.
- The pond surface is not frozen during any part of the testing.
- An anemometer is installed for the duration of the test and wind speed is at 10 metres per second or less for at least 24 hours during the test.

Criteria

When tested in accordance with the requirements above, the pond is considered to meet the pond drop test criteria if the maximum pond level drop does not exceed the following:

<u>Maximum depth of pond (m) excluding freeboard</u>	<u>Maximum allowable pond level drop (mm per 24 hours)</u>
<u><0.5</u>	<u>1.2</u>
<u>0.5 to 1.0</u>	<u>1.4</u>
<u>1.0 to 1.5</u>	<u>1.6</u>
<u>1.5 to 2.0</u>	<u>1.8</u>
<u>>2.0</u>	<u>2.0</u>

19. Schedule of progressive implementation of animal waste storage requirements

Part B:
Animal waste storage and application

Many animal waste systems in Otago will need to be upgraded to meet the requirements of this Plan. The intent of this Schedule is to stage implementation of the Plan’s requirements according to the environmental risk posed by existing systems. To assess this risk, Schedule 19 provides two calculations that will determine the current storage volume available on a landholding (in days) as follows:

- Schedule 19A sets out the calculations required to determine days of storage available on a landholding.
- Schedule 19B sets out the date by which a complete resource consent application must be lodged with the Otago Regional Council under Rule 14.7.3.1 (and correspondingly Rule 14.7.1.2 ceases to apply). A complete application is one that is not determined as being incomplete by the Otago Regional Council pursuant to section 88 of the Resource Management Act 1991.

19A Storage calculation

Two calculations are required to determine the current minimum number of days of animal waste storage available on a landholding. These are set out below.

Step One: Daily waste volume

To calculate the daily waste volume per farm, use the following formula:

$$\begin{array}{l}
 \text{Daily waste volume (m}^3\text{)} \\
 \text{volume (m}^3\text{)}
 \end{array}
 \equiv
 \frac{\text{Maximum number of cows milked per day}}{\text{Maximum number of times per day that cows are milked during milking season}}
 \times
 0.05^{\wedge}
 \times$$

^ being 0.05 cubic metres (50 litres per cow per day)

For example:

During milking season, Farm A milks 500 cows twice per day. Using the formula above:

$$\text{Daily waste volume (m}^3\text{)} \equiv 500 \times 0.05 \times 2$$

$$\text{Daily waste volume (m}^3\text{)} \equiv 50$$

Step Two:

To calculate the minimum number of days of storage available, use the following formula:

$$\frac{\text{Days of storage available}}{\text{available}} = \frac{\text{Actual storage volume (m}^3\text{)}^\wedge \div \text{Daily waste volume (m}^3\text{)}}{\text{available}}$$

^ determined assuming that the storage facility is empty

For example:

As calculated above, Farm A has a daily waste volume of 50 m3. The farm has a storage pond with a storage volume of 1000 m3. Using the formula above:

$$\frac{\text{Days of storage available}}{\text{available}} = \frac{1000 \div 50}{\text{available}}$$

$$\frac{\text{Days of storage available}}{\text{available}} = \frac{20}{\text{available}}$$

Using the table in Schedule 19B, Otago Regional Council must receive a complete resource consent application under Rule 14.7.3.1 from Farm A no later than two years from the date Plan Change 8 is made operative.

19B Application dates

The following table sets out the dates by which complete resource consent applications must be received under Rule 14.7.3.1 (and correspondingly Rule 14.7.1.2 ceases to apply). The “application date” is the date Plan Change 8 is made operative, plus the number of years in the “year” column below.

<u>Days of storage available as calculated in accordance with Schedule 19B</u>	<u>Year</u>
<u>0 – 10</u>	<u>0.5</u>
<u>11 – 40</u>	<u>2</u>
<u>41+</u>	<u>3</u>

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Glossary

Terms marked with an asterisk * are terms defined by the Resource Management Act 1991.

In this Plan, the spelling of Māori words using ng and k is interchangeable (for example Ngāi Tahu and Kāi Tahu).

Abandoned structure	A structure that is no longer required or utilised for the purpose for which it was erected or placed.
Access strip*	Means a strip of land created by the registration of an easement in accordance with Section 237B (of the Resource Management Act 1991) for the purpose of allowing public access to or along any river, or lake, or the coast, or to any esplanade reserve, esplanade strip, other reserve, or land owned by the local authority or by the Crown (but excluding all land held for a public work except land held, administered or managed under the Conservation Act 1987 and the Acts named in the First Schedule to that Act).
Adverse effect	A detrimental effect.
Aerial discharge	The discharge of any agrichemical from any aircraft.
Agricultural and horticultural activities <i>(definition only applies where term is underlined in this Plan)</i>	All activities involved with the primary industries of agriculture and horticulture, including common stock drinking-water schemes, but excludes processing agricultural and horticulture produce.
Agricultural waste	Waste from an agricultural process or premises that is derived from primary agricultural production. This includes animal waste and animal dip material.
Allocation limit	The maximum flow or quantity of water in a water body, which is able to be allocated to resource consents for taking.
Alluvium	Sediment including rock, gravel, sand or silt material deposited by flowing water on floodplains and in lake and river beds, as a result of alluvial processes.
Alteration of the bed	Any bed disturbance, reclamation or deposition.
Amenity values*	Means those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.
Animal waste	Faeces or urine from any animal.
Animal waste system	Includes <u>Means the</u> collection, storage, treatment, disposal or application of liquid or solid animal waste.

Annual renewable yield	<i>[Repealed – 1 March 2012]</i>
Annual volume <i>(definition only applies where term is underlined in this Plan)</i>	The volume of water that can be taken or diverted in any 12-month period.
Anticipated environmental result	The intended result or outcome on the environment as a consequence of implementing the policies and methods.
Any other activities <i>(definition only applies where term is underlined in this Plan)</i>	Activities that are not agricultural and horticultural activities, hydro-electricity generation, industrial and commercial activities, tourism and recreation facilities, or town and community water supplies.
Aquatic plant	Any plant species that grows in water and is either totally or predominantly submerged in water.
Aquifer	A geological formation capable of holding water.
Aquifer compression	A reduction in an aquifer's capacity to hold water.
Archaeological site	Any place in New Zealand that <ul style="list-style-type: none"> (a) EITHER – <ul style="list-style-type: none"> (i) Was associated with human activity that occurred before 1900; or (ii) Is the site of the wreck of any vessel where that wreck occurred before 1900; and (b) Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand. <p>- defined by Section 2 of the Historic Places Act 1993.</p>
Artesian pressure	The pressure of water in a confined aquifer resulting in water level rise above the bottom of the confining layer.
Assessed maximum annual take	The sum of the takes of groundwater as calculated under Method 15.8.3.1
Assimilative capacity	The ability of a water body to assimilate contaminants without adversely affecting the natural and human use values supported by the water body.

Augmentation	Increasing the supply of available water through the active management of water resources.
Back-flow	The return of water to the source water body, through the device used to take water, including back-siphoning.
Bed*	Means, - <ul style="list-style-type: none"> (a) In relation to any river- <ul style="list-style-type: none"> (i) For the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks: (ii) In all other cases, the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and (b) In relation to any lake, except a lake controlled by artificial means, - <ul style="list-style-type: none"> (i) For the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin: (ii) In all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and (c) In relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and (d) In relation to the sea, the submarine areas covered by the internal waters and the territorial sea.
Bed disturbance	Any activity which affects the bed or bank of a water body and includes any excavation, dredging, drilling, tunnelling, and any widening, deepening or altering of the course of the water body.
Bedform	The topography or shape of the bed of a lake or river.
Bed material	The sand, gravel or other alluvium forming part of the bed of a lake or river.
Benthic invertebrate	An animal without a backbone (e.g. snail, crustacean, worm, insect) living on, under, or within the bed material of a water body.
BOD₅	The quantity of oxygen consumed by microbial and chemical processes over a five day period at 20 degrees.
Bore	Every device or means, including any well or pit, which is drilled or constructed for the purpose of taking groundwater, or which results in groundwater being taken, other than piezometers or other monitoring devices used for water sampling purposes only.

Bore interference	The reduced ability of users in a localised area to take water from a bore, due to the taking of water from another bore, reducing the pressure and/or the level of groundwater.
Bunding	Constructing an embankment or low wall (usually concrete) designed to contain accidental spillage of a stored liquid.
CFU	Colony-Forming Units, an indication of faecal contamination.
Cleanfill	A natural material such as sand, gravel and rock, and such other materials as concrete, brick or demolition products that are free of soluble materials and are therefore not subject to biological or chemical breakdown.
Coastal marine area*	Means the foreshore, seabed, and coastal water, and the air space above the water - <ul style="list-style-type: none"> (a) Of which the seaward boundary is the outer limits of the territorial sea: (b) Of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of - <ul style="list-style-type: none"> (i) One kilometre upstream from the mouth of the river; or (ii) The point upstream that is calculated by multiplying the width of the river mouth by 5.
Conditions*	In relation to plans and resource consents, includes terms, standards, restrictions, and prohibitions.
Consent authority*	Means a regional council, a territorial authority, or a local authority that is both a regional council and a territorial authority, whose permission is required to carry out an activity for which a resource consent is required under the Resource Management Act 1991.
Conspicuous change in visual clarity	A visual change in water clarity of more than 40%.
Consumptive use	Where a use results in a net loss of water from the water body.
Contact recreation	Recreational activities involving contact with water; either primary (full immersion) or secondary (that which may result in some form of contact with water).
Contaminant*	Includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy or heat - <ul style="list-style-type: none"> (a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or

- (b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

Contaminated land

Land at which hazardous substances occur at concentrations above background levels and where assessment indicates that that land poses, or is likely to pose, an immediate or long-term hazard to human health or the environment.

Contravene*

Includes fail to comply with.

Controlled activity*

If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a controlled activity, a resource consent is required for the activity and -

- (a) The consent authority must grant a resource consent (except if Section 106 of the Act applies); and
- (b) The consent authority's power to impose conditions on the resource consent is restricted to the matters over which control is reserved (whether in its plan or proposed plan, a national environmental standard, or otherwise); and
- (c) The activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.

Controlled lake

A lake where structures are used to manage the quantity of water leaving the lake.

Critical source area

Means a landscape feature such as a gully, swale, or depression that accumulates runoff from adjacent flats and slopes and delivers it to surface water body such as rivers and lakes, artificial waterways, and field tiles.

Dairy cattle

Means cattle farmed for milk production and includes dairy cows, weaned and unweaned calves of dairy cows, and non-milking dairy cattle such as youngstock and bulls.

Dairy Effluent Storage Calculator

Means the Dairy Effluent Storage Calculator available from Otago Regional Council's website at <http://www.orc.govt.nz>

Dam

A structure used or to be used for the damming of any water, or water body.

Datum

The fixed level for basing subsequent level measurements, in this case datum means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres.

Deemed permit

A mining privilege in respect of water (see Appendix 2).

Defence against water	Any dam, weir, bank, carriageway, groyne, or reservoir, and any structure or appliance of any kind which has or may have the effect of stopping, diverting, controlling, restricting, or otherwise regulating the flow or spread or subsidence, in or out of a water body, of water including flood waters, which is specifically established for the purpose of flood hazard mitigation.
Deposition	The deposit of any substance, other than water or waterborne contaminants (discharge), or fill material (reclamation).
Discharge*	Includes emit, deposit, and allow to escape.
Discretionary activity*	<p>If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a discretionary activity, a resource consent is required for the activity and -</p> <p>(a) The consent authority may decline the consent or grant the consent with or without conditions; and</p> <p>(b) If granted, the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.</p>
Disposal field	That part of a constructed on-site waste water treatment system where the effluent is discharged to land.
District plan*	<p>(a) Means an operative plan approved by a territorial authority under Schedule 1 of the Resource Management Act 1991; and</p> <p>(b) Includes all operative changes to the plan (whether arising from a review or otherwise).</p>
Divert	In relation to the diversion of water, is the process of redirecting the flow of water from its existing course to another.
Down-hole pump test	A test conducted to determine aquifer or bore characteristics.
Drain	Artificial channel or subsurface conduit (e.g. mole drain, tile drain or drainage tunnel) constructed to either lower the watertable or divert water, excluding a water race.
Drainage water	Water collected by and discharged from a drain.
Drilling	<p>The process of creating a hole in the ground with a drill to a depth greater than 1 metre. This does not include hole creation for the purpose of:</p> <ul style="list-style-type: none"> • The construction of a bore; • The erection of fences or overhead utilities; or

	<ul style="list-style-type: none"> • The placement of building foundations.
Drill hole	The hole created by drilling.
Drinking-water supply reservoir	A reservoir which is used primarily for the purpose of storing a supply of drinking water.
<u>Earthworks</u>	<u>Means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fence posts.</u>
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
Effect*	<p>In the Resource Management Act 1991, unless the context otherwise requires, the term effect includes -</p> <ul style="list-style-type: none"> (a) Any positive or adverse effect; and (b) Any temporary or permanent effect; and (c) Any past, present, or future effect; and (d) Any cumulative effect which arises over time or in combination with other effects - <p>regardless of the scale, intensity, duration, or frequency of the effect, and also includes -</p> <ul style="list-style-type: none"> (e) Any potential effect of high probability; and (f) Any potential effect of low probability which has a high potential impact.
Effluent	Liquid waste, including liquid leaching from solid waste.
Enforcement order*	Means an order made under Section 319 of the Resource Management Act 1991 for any purposes set out in Section 314 of the Act; and includes an interim enforcement order made under Section 320 of the Act.
Environment*	<p>Includes -</p> <ul style="list-style-type: none"> (a) Ecosystems and their constituent parts, including people and communities; and (b) All natural and physical resources; and (c) Amenity values; and (d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.
Environmental flow and level regimes <i>(definition)</i>	The flow-sharing, allocation limits and minimum flows and levels established by the Water Plan as specified in Rule 12.1.4.4A.

only applies where term is underlined in this Plan)

Erosion	The processes of the wearing away of the land surface (including the land that forms the bed of a lake or river) by natural agents and the transport of the material that results.
Esplanade reserve*	Means a reserve within the meaning of the Reserves Act 1977 - <ul style="list-style-type: none"> (a) Which is either - <ul style="list-style-type: none"> (i) A local purpose reserve within the meaning of Section 23 of that Act, if vested in the territorial authority under Section 239 of the Resource Management Act 1991; or (ii) A reserve vested in the Crown or a regional council under Section 237D of the Resource Management Act 1991; and (b) Which is vested in the territorial authority, regional council, or the Crown for a purpose or purposes set out in Section 229 of the Resource Management Act 1991.
Esplanade strip*	Means a strip of land created by the registration of an instrument in accordance with Section 232 of the Resource Management Act 1991 for a purpose or purposes set out in Section 229 of the Act.
Excavation over a groundwater protection zone	The digging and removal of a volume of earth material from below the topsoil horizon in excess of 10 cubic metres, or to a depth of greater than 1 metre, but does not include that required for bore construction, or for the erection of fences, overhead utilities or foundations for buildings, or for land cultivation.
Exotic plant	A plant which is not native to New Zealand. These may include introduced plants which have been brought in by accident or design.
Extraction	Removal of material from the lake or river system.
Faecal coliform	A type of bacteria associated with animal excrement that indicates faecal pollution. If the faecal coliform count is high there may be disease-causing organisms present.
Fauna	All the animal life of a given place.
Feed pad	Any confined, uncovered structure, located on production land, which is designed for the purpose of controlled intensive feeding of stock with supplementary feed.
Fertiliser	Any proprietary substance specifically manufactured for use in increasing the nutrient status of land. Excludes compost, effluent or seaweed.

GLOSSARY

**Financial
contribution**

A contribution as set out in Section 108(9) of the Resource Management Act.

Fisheries and wildlife (<i>definition only applies where term is underlined in this Plan</i>)	Activities relating to the management and enhancement of habitats of fish and indigenous wildlife.
Flood carrying capacity	The capacity of any channel to convey flood waters.
Flooding of any other person's property	Where a discharge of water or contaminants on one property causes inundation on another property.
Flora	All the plant life of a given place.
Flushes	Wet or damp areas of ground where the watertable intersects the land surface. Characterised by the presence of wetland species such as Sphagnum, and a greener, more lush appearance than surrounding vegetation.
Ford	Any modification of the bed to establish a crossing by which any vehicle, livestock, or persons may traverse through any water body.
Galaxias	The genus name of members of the native fish family Galaxiidae, which includes inanga (whitebait) and banded kokopu.
Galaxiid	A member of the native fish family Galaxiidae.
Grassed swale	An open artificial water body or drain with gently-sloping walls of permeable material that conducts water only when the substrate is saturated.
Groundwater	Water that occupies or moves through openings, cavities or spaces in geological formations under the ground.
Groundwater protection zone	An area of land in which land use and water use activities are to be managed to protect the underlying groundwater resource.
Hapu	Sub-tribe, extended whanau.
Hazardous substance	Unless expressly provided otherwise by regulations, any substance - <ul style="list-style-type: none"> (a) With one or more of the following intrinsic properties: <ul style="list-style-type: none"> (i) Explosiveness: (ii) Flammability: (iii) A capacity to oxidise: (iv) Corrosiveness: (v) Toxicity (including chronic toxicity): (vi) Ecotoxicity, with or without bioaccumulation; or (b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially

increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition.

- defined by Section 2 of the Hazardous Substances and New Organisms Act 1996.

Herbicide	Substance toxic to plants and used to kill or control plants.
High degree of naturalness	Retaining characteristics not significantly modified by human beings or non-indigenous plants or animals.
Historic place	Any land (including an archaeological site); or any building or structure (including part of a building or structure); or any combination of land and a building or structure that forms part of the historical and cultural heritage of New Zealand and lies within the territorial limits of New Zealand; and includes anything that is in or fixed to such land.
Hydrological values	The natural processes of an ecosystem in providing regulated water flow and enhanced water quality.
Impervious strata	A layer of soil, rock or other natural material which does not allow the percolation of water.
In-catchment needs <i>(definition only applies where term is underlined in this Plan)</i>	Water requirements of users where the water is taken or diverted for use within the Waitaki catchment.
Indigenous species	A New Zealand native species that is, or is thought to have been, naturally existing within the catchment.
Industrial and commercial activities <i>(definition only applies where term is underlined in this Plan)</i>	Industrial and commercial activities (but excluding hydro-electricity generation) that are not served by a reticulated town and community water supply.
Industrial or trade premises*	Means - <ul style="list-style-type: none"> (a) Any premises used for any industrial or trade purposes; or (b) Any premises used for the storage, transfer, treatment, or disposal of waste materials or for other waste-management purposes, or used for composting organic materials; or (c) Any other premises from which a contaminant is discharged in connection with any industrial or trade process - but does not include any production land.

	In this plan, the phrase ‘industrial or trade premises’ includes any structure associated with electricity generation.
Industrial or trade process*	Includes every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, and any intervening storage of the raw material, partly processed matter, or product.
Industrial or trade waste	Waste from an industrial or trade premises, that is derived from an industrial or trade process.
Instantaneous take	All takes of water occurring at a particular time.
Intake structure	The device by which water is taken from a water body.
<u>Intensive grazing</u>	<u>Means grazing of stock on forage crops (including brassica, beet and root vegetable crops), excluding pasture and cereal crops.</u>
Intrinsic values*	In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including <ul style="list-style-type: none"> - (a) Their biological and genetic diversity; and (b) The essential characteristics that determine any ecosystem’s integrity, form, functioning, and resilience.
Issue	A matter of concern to the region’s community regarding activities affecting some aspect of natural and physical resources and the environment of the region.
Iwi	Tribe.
Iwi authority*	Means the authority which represents an iwi and which is recognised by that iwi as having authority to do so. (The iwi authority for the Otago region is Te Runanga O Ngai Tahu).
Iwi management plan	A relevant planning document, such as the Kai Tahu Ki Otago Natural Resource Management Plan, recognised by an iwi authority affected by this Plan, to which local authorities shall have regard.
Kai Tahu	Descendants of Tahu, the tribe. The manawhenua of the Otago region. (Also known as Ngai Tahu).
<i>Kāi Tahu or Ngāi Tahu (definition only applies where term is underlined in this Plan)</i>	The collection of individuals who descend from the primary hapū of Waitaha, Ngāti Mamoe, and Ngāi Tahu, namely Kāti Kuri, Kāti Irakehu, Kāti Huirapa, Ngāi Tuahuriri and Kai Te Ruahikihiki.
Kaitiaki	Guardians.

Kaitiakitanga*	Means the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Maori in relation to natural and physical resources; and includes the ethic of stewardship.
Kanakana	The primitive parasitic native fresh water lamprey, <i>Geotria australis</i> .
Kokopu	Native fish species of the Galaxiid family, including banded kokopu (<i>Galaxias fasciatus</i>) and giant kokopu (<i>G. argenteus</i>), sometimes referred to as ‘native trout’.
Koura	Native fresh water crayfish of the genus <i>Paranephrops</i> .
Lake Tuakitoto	The variable and more or less continuous body of water commonly known as Lake Tuakitoto, including Robson’s Lagoon, situated at and about map reference NZMS260 H46:650370. The shoreline of the lake is defined as the variable extent of surface water, as it is observed at any particular time, whether of natural extent or whether restricted by any floodbank.
Lake*	Means a body of fresh water which is entirely or nearly surrounded by land.
Land*	<ul style="list-style-type: none"> (a) Includes land covered by water and the air space above land; and (b) In a national environmental standard dealing with a regional council function under Section 30 of the Resource Management Act 1991 or a regional rule, does not include the bed of a lake or river; and (c) In a national environmental standard dealing with a territorial authority function under Section 31 of the Act or a district rule, includes the surface of water in a lake or river.
Land-based discharge	The discharge of any agrichemical from any thing other than any aircraft.
Land drainage	The removal of water from in or on land.
Landholder	Includes land owner, lessee and occupier.
Landholding	<ul style="list-style-type: none"> (1) For land subject to the Land Transfer Act 1952, land in: <ul style="list-style-type: none"> (i) A single certificate of title; or (ii) Two or more adjoining certificates of title, with a common occupier. (2) For land not subject to the Land Transfer Act 1952, all contiguous land last acquired under one instrument of conveyance and occupied by a common occupier.
Lawful take of water	Any take under Section 14(3) of the Resource Management Act, any take exercised under Rules 12.1.2.1 to 12.1.2.6, or 12.2.2.1 to 12.2.2.3 of this Plan, any take exercised under the Transitional Regional Plan rule constituted by General Authorisations 1 to 5, 9

and 12, and any take under any resource consent or deemed permit under the Resource Management Act 1991.

Leachate	A liquid contaminant resulting from the liquid being exuded from or percolated through some more-or-less solid matter.
Legal public access	Includes legal roads, marginal strips, esplanade reserves, esplanade strips, access strips and Walkways.
Line	A wire or conductor (including a fibre optic cable) used or intended to be used for telecommunication or transmission of electricity.
Local authority	A term that collectively describes regional councils, city councils, and district councils.
Long-drop toilet	An unlined hole or pit excavated for the disposal of human sewage, which is not subject to any treatment or flushing.
Macro-invertebrate Community Index (MCI)	An index of the proportion of sensitive to tolerant species (designed to assess the effects of nutrient enrichment in stoney streams, but also affected by dissolved oxygen, temperature and physical habitat features), among the community of benthic invertebrates that can be seen with the naked eye (see Appendix 1).
Mahika kai	Places where food is procured or produced, examples in the case of waterborne mahika kai include eels, whitebait, kanakana, kokopu, koura, fresh water mussels, indigenous waterfowl, watercress and raupo.
Main stem	The principal course of a river (i.e. does not include tributaries).
Mana	Authority, influence or prestige.
Manawhenua*	Means customary authority exercised by an iwi or hapu in an identified area.
Margin	Land alongside a river or lake.
Mauri	Life force; for example the mauri of a river is most recognisable when there is abundance of water flow and the associated ecosystems are healthy and plentiful; a most important element in the relationship that Kai Tahu have with the water bodies of Otago.
Maximum allocation limit	The quantity of groundwater as established under Policy 6.4.10A2.
MCI	See Macroinvertebrate Community Index.
Mean annual recharge	The quantity of groundwater recharge as calculated by Schedule 4D.

Mean high water springs	The average line of spring high tide.
Method	The practical action by which a policy is implemented.
Micro hydro-electricity generation <i>(definition only applies where term is underlined in this Plan)</i>	The generation of hydro-electricity not exceeding a capacity of 50 Kilowatts continuous output.
Minimum flow	The flow below which the holder of any resource consent to take water must cease taking water.
Mining privilege	See Appendix 2.
Mixing zone	An area of water associated with a discharge within which any standards or requirements relating to water quality are set aside to enable reasonable mixing to occur. (See Reasonable mixing).
Mouth*	For the purpose of defining the landward boundary of the coastal marine area, means the mouth of a river either - <ul style="list-style-type: none"> (a) As agreed and set between the Minister of Conservation, the regional council, and the appropriate territorial authority in the period between consultation on, and notification of, the proposed regional coastal plan; or (b) As declared by the Environment Court under Section 310 of the Resource Management Act 1991 upon application made by the Minister of Conservation, the regional council, or the territorial authority prior to the plan becoming operative, - and once so agreed and set or declared shall not be changed in accordance with Schedule 1 of the Act or otherwise varied, altered, questioned, or reviewed in any way until the next review of the regional coastal plan, unless the Minister of Conservation, the regional council, and the appropriate territorial authority agree.
Natural and human use values	Characteristics of a water body which are important to, or are an essential part of, ecological communities, or are enjoyed or utilised by people and communities. While some of these values are identified in Schedule 1, natural character, amenity values, existing lawful uses, and archaeological sites will be identified on a case-by-case basis.
Natural and physical resources*	Includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures.
Natural hazard*	Means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or

flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

Noa	Free from tapu or other restriction.
Non-biodegradable	Unable to be decomposed by living organisms present in the particular receiving environment.
Non-complying activity*	<p>If an activity is described in the Resource Management Act 1991, regulations (including a national environmental standard), a plan, or a proposed plan as a non-complying activity, a resource consent is required for the activity and the consent authority may -</p> <ul style="list-style-type: none"> (a) Decline the consent; or (b) Grant the consent, with or without conditions, but only if the consent authority is satisfied that the requirements of Section 104D of the Act are met and the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.
Non-consumptive take **	<p>A take is non-consumptive when:</p> <ul style="list-style-type: none"> (1) The same amount of water is returned to the same water body at or near the location from which it was taken; and (2) There is no significant delay between the taking and the returning of the water. <p>** as defined in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010</p>
Non-point source discharge	A discharge of water or contaminant that enters a water body from a diffuse source, such as land runoff or infiltration.
Notified use	Any right in respect of natural water which was notified under Section 21 (2) or 21 (2A) of the Water and Soil Conservation Act 1967 (an 'existing authority' under Section 386(1)(b) of the Resource Management Act 1991).
Objective	The desired result, end state, situation or condition that is aimed for.
Occupier*	<p>Means -</p> <ul style="list-style-type: none"> (a) The inhabitant occupier of any property; and (b) <i>[Repealed]</i> (c) For the purposes of Section 16 of the Resource Management Act 1991, in relation to any land (including any premises and any coastal marine area), includes any agent, employee, or other person acting or apparently acting in the general management or control of the land, or any plant or machinery on that land.

On-site waste water treatment system	Any system, such as a septic tank, designed to treat household liquid effluent including sewage within the boundary of the property on which the effluent was generated, and includes the treatment system and any attached disposal field.
Open pile(d)	The nature of a structure’s supporting piles whereby no significant hindrance to the passage of water or sediment is caused.
Operative*	In relation to a policy statement or plan, or a provision of a policy statement or plan, means that the policy statement, plan, or provision - <ul style="list-style-type: none"> (a) Has become operative - <ul style="list-style-type: none"> (i) In terms of clause 20 of Schedule 1 of the Resource Management Act 1991; or (ii) Under Section 86F of the Act; and (b) Has not ceased to be operative.
Papatipu Runanga	The Papatipu Runanga and their takiwa for the Otago Region are described in the schedule to the Te Runanga o Ngai Tahu Act 1996.
Percent probability flood	A flood event which has a particular probability of being exceeded in any 12 month period.
Permitted activity*	If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a permitted activity, a resource consent is not required for the activity if it complies with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.
Person*	Includes the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporate.
Pest plant	Any plant specified as a pest in a pest management strategy written under the Biosecurity Act 1993.
Pesticide	A substance or mixture of substances used to kill or control unwanted species of plants, animals or other organisms.
Policy	The course of action to achieve the objective.
Point source discharge	A discharge of water or contaminant that enters a water body at a definable point, often through a pipe or drain.
Primary allocation	The quantity of water established under Policy 6.4.2.
Production land*	(a) Means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products):

	(b) Does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals - and “production” has a corresponding meaning.
Prohibited activity*	<p>If an activity is described in the Resource Management Act 1991, regulations (including a national environmental standard), a plan, or a proposed plan as a prohibited activity, -</p> <p>(a) No application for a resource consent may be made for the activity; and</p> <p>(b) The consent authority must not grant a consent for it.</p>
Proposed plan*	<p>In the Resource Management Act 1991, unless the context otherwise requires, proposed plan -</p> <p>(a) Means a proposed plan, a variation to a proposed plan or change, or a change to a plan proposed by a local authority that has been notified under clause 5 of Schedule 1 but has not become operative in terms of clause 20 of Schedule 1; and</p> <p>(b) Includes a proposed plan or a change to a plan proposed by a person under Part 2 of Schedule 1 that has been adopted by the local authority under clause 25(2)(a) of Schedule 1.</p>
Protective soil mantle	A layer of soil, rock or other natural material which reduces the percolation of water.
Public notice*	<p>(a) Means a notice published in a newspaper circulating in the entire area likely to be affected by the proposal to which the notice relates; and</p> <p>(b) If a local authority also publishes a notice on an Internet site to which the public have free access, includes that notice.</p>
Rahui	Restrictions.
Reasonable mixing	The process where undiluted effluent disperses through receiving waters. Mixing results in a mixing zone where the concentration of contaminants varies from that in the effluent to that of the fully mixed receiving water. Reasonable mixing may be said to have occurred at some point between the point of discharge and the point at which the effluent is completely mixed with the receiving water. Beyond the reasonable mixing zone, the effluent and water mix complies with any water quality standards for the water body.
Reclamation	The permanent infilling of a water body or part of a water body with sand, rock, quarry material, concrete, or other similar material, for any purpose, and includes any embankment or causeway, but does not include any structure above water where that structure is supported by piles, or any deposition of material or infilling that is not permanent.

Regional plan*	(a) Means an operative plan approved by a regional council under Schedule 1 (including all operative changes to the plan (whether arising from a review or otherwise)); and (b) Includes a regional coastal plan.
Regionally Significant Wetland	See Policy 10.4.1A
Regionally significant wetland value	See Policy 10.4.1.
Registered community drinking water supply	A drinking water supply, which is registered under Section 69J of the Health Act and serves a community of more than 25 people for more than 60 days a year.
Registered Historic Place	Any Historic Place registered under Part II of the Historic Places Act 1993.
Residual flow	Refer to Policy 6.4.7.
Resource consent	A consent for an activity as set out in Section 87 of the Resource Management Act 1991; and includes all conditions to which the consent is subject.
Restricted discretionary activity*	If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a restricted discretionary activity, a resource consent is required for the activity and - (a) The consent authority's power to decline a consent, or to grant a consent and to impose conditions on the consent, is restricted to the matters over which discretion is restricted (whether in its plan or proposed plan, a national environmental standard, or otherwise); and (b) The activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.
Reticulated system, or reticulation	The means by which water, stormwater, sewage or other waterborne contaminant is collected and delivered prior to discharge.
Riparian vegetation	The terrestrial plants growing on the bed or margin of a water body.
River*	Means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply

	race, canal for the supply of water for electricity power generation, and farm drainage canal).
Runanga	Local representative groups or community system of organisation.
Sacrifice paddock	Any paddock which is set aside for the prolonged confinement and the controlled, intensive feeding of stock with supplementary feed, in order to avoid damage to their usual pasture.
<u>Sediment trap</u>	<u>An excavated area in the bed of an ephemeral or intermittently flowing river designed and constructed solely for the purpose of slowing water velocity to allow sediments to drop from the water column.</u>
Seven-day (“7-day”) mean annual low flow	<p>The seven-day low flow in any year is determined by calculating the average flow over seven consecutive days for every seven consecutive day period in the year, and choosing the lowest.</p> <p>When this is done for every year of record, the seven-day mean annual low flow can be determined by adding the lowest seven-day low flows for every year of record and dividing by the number of years in the record.</p>
Small dam	<p>A dam:</p> <ul style="list-style-type: none"> (a) Where the size of the catchment upstream of the dam is no more than 50 hectares; and (b) where the water stored immediately upstream of the dam is no more than 3 metres deep; and (c) where the volume of water stored by the dam is no more than 20,000 cubic metres.
Soil contamination	Occurs where the discharge of a contaminant reduces the primary productive capacity of soil.
Stand-off pad	Any purpose built uncovered area, located on production land, for the confinement of stock in order to avoid damage to their usual pasture.
Stormwater	The water running off from any impervious surface such as roads, carparks, roofs, and sealed runways.
Structure*	Means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft.
Suction dredging; Suction dredge mining	Any activity utilising a motor, pump, and hose within a river bed.
<u>Suitably Qualified Person</u>	<u>A person that has been assessed and approved by the Otago Regional Council as being appropriately qualified, experienced and competent in the relevant field of expertise.</u>

Sullage	The waste water from sinks, basins, baths, showers and similar appliances, but not including toilet wastes (sometimes referred to as grey water).
Supplementary allocation	A volume of water established under Policies 6.4.9 or 6.4.10 which is able to be taken subject to a supplementary allocation minimum flow set under those policies.
Suspended solids	Particulate matter carried in suspension within water.
Taking	In relation to the taking of water, is the process of extracting the water for any purpose and for any period of time.
Taoka	Treasures.
Tapu	Sacred.
Tarn	Small mountain lake or pool, often formed in a cirque basin.
Technical efficiency <i>(definition only applies where term is underlined in this Plan)</i>	Using a resource in a way that any given output is produced at least cost, including avoiding waste.
Territorial local authority	A term that collectively describes city councils and district councils, but not regional councils.
The Act	The Resource Management Act 1991.
To Dam	In relation to the damming of water, is the process of impounding the water for any purpose and for any period of time, as in a reservoir.
Tourism and recreation facilities <i>(definition only applies where term is underlined in this Plan)</i>	Tourism and recreation facilities that are not served by a reticulated town and community supply, such as hotels, lodges, restaurants and ski fields.
Town and community water supply <i>(definition only applies where term is underlined in this Plan)</i>	Reticulated water supplies servicing urban areas, rural-residential and residential subdivisions including all commercial and industrial premises and schools and other educational facilities located within the reticulated area.

Trace amount of any contaminant	A contaminant is present in a quantity that is incapable of practicable measurement.
Transmissivity	The degree to which an aquifer allows water to pass through it.
Treaty of Waitangi (Te Tiriti o Waitangi)	The same meaning as the word “Treaty” as defined in Section 2 of the Treaty of Waitangi Act 1975.
Upland bogs	A wet or spongy high altitude area of ground chiefly composed of decaying vegetable matter or peat.
Use	<i>[Repealed – 1 March 2012]</i>
Vegetation	Includes any trees, shrubs, plants or grasses.
Vessel	Every description of ship, boat, ferry, or craft used in navigation, whether or not it has any means of propulsion, and regardless of that means; and includes: a barge, lighter, or other like vessel; a hovercraft or other thing deriving full or partial support in the atmosphere from the reactions of air against the surface of the water over which it operates; a submarine or other thing used in navigation whilst totally submerged.
Waahi taoka	Treasured resource; values, sites and resources that are valued and reinforce the special relationship Kai Tahu have with Otago’s water resources.
Waahi tapu	Sacred places; sites, areas and values associated with water bodies that hold spiritual values of importance to Kai Tahu.
Waitaki catchment <i>(definition only applies where term is underlined in this Plan)</i>	(a) Means the area of land bounded by watersheds draining into the Waitaki River; and (b) Includes aquifers wholly or partially within that area of land.
Walkway	A formal Walkway created under the New Zealand Walkways Act 1975.
Water*	(a) Means water in all its physical forms whether flowing or not and whether over or under the ground: (b) Includes fresh water, coastal water, and geothermal water: (c) Does not include water in any form while in any pipe, tank, or cistern.
Water allocation committee	Refer to Policy 6.4.12.

G L O S S A R Y

Water body*	Means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.
Water conservation order*	Has the meaning set out in Section 200 of the Resource Management Act 1991.
“Water Info” phone	The telephone service by which the Otago Regional Council provides frequently-updated information on water body condition including river flows.
Water race	An artificial channel used for conveying water for various uses, but not for the drainage of land.
Water supply values	The existence of a take for human consumption, which people and communities have come to depend upon.
Water user group	Refer to Policy 5.4.12.
Wet bed	That part of the bed of a lake or river which is covered by water.
Wetland*	<p>Includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.</p> <p>In this plan, ‘wetland’ excludes any wetland constructed for the purpose of water quality management.</p>
Whanau	Family.
Whanui	Large, extended, broad.

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Appendices

1 The Macroinvertebrate Community Index

The most widely used and effective form of biological monitoring in streams and rivers is the sampling and analysis of the invertebrate life (aquatic insects, crustaceans, snails, worms etc) living on the bed or amongst aquatic plants. These invertebrates are almost always found in abundance in such habitats, they are easy to collect, and with suitable resources they are easy to identify.

Typically there are 15 to 30 distinct “species” (or taxa) of invertebrates at most stream or river sites. The composition of these communities is dependent on physical habitat characteristics, water quality and biological factors. If physical habitat quality is kept consistent (eg sampling is undertaken in fast-flowing, shallow stony “riffles” rather than slow flowing pools or backwaters) water quality tends to become the factor determining community composition.

Some “tolerant” invertebrate species are able to inhabit degraded waters such as algae-smothered habitats or nutrient enriched or low oxygen waters. Other species are highly sensitive to such conditions and are almost always found in cool, “clean” (low-nutrient), high-oxygen waters.

The fresh water biological index referred to in this Plan (see Policy 7.6.2) is the Macroinvertebrate Community Index (MCI). The MCI was developed for New Zealand stony streams by Dr John Stark in 1985, using a British system (the BMWP Index) which assigned sensitivity scores to particular fresh water invertebrate species. These scores relate to the ability of each species to tolerate nutrient enrichment and associated water quality degradation. The scores range from one (for the most tolerant species) to ten (for the most sensitive species). For example, the “swimming mayfly” has a sensitivity score of 9, while the common sandfly has a sensitivity score of 3.

An MCI value is calculated simply by averaging the sensitivity scores for the species found at one site, and multiplying this average by a scaling factor of 20. A high MCI value (over 100) is generally indicative of good water quality, although it will vary depending upon the river type, as shown in Table 5.

Table 5: MCI ranges for different stream and river habitat types

River type	Habitat quality (MCI score)		
	High quality	Medium quality	Low quality
Stony riffle	100 - 130	80 - 100	60 - 80
Fine sandy/gravelly runs	90 - 110	70 - 90	50 - 70
Weedy/muddy runs/pools	80 - 100	60 - 80	40 - 60

The MCI value can therefore be used to indicate the state of water quality in Otago’s streams and rivers.

The expected MCI scores for the water bodies identified in Policy 7.6.2, as well as the actual observed MCI scores, are shown in Table 5. The expected MCI scores become the target for enhancing water quality in the identified water bodies.

Table 6: Water bodies with degraded water quality for aquatic habitats.

Water body	Habitat type	Average observed MCI score	Expected MCI score
Hayes Creek	Weedy/muddy runs	67	> 70
Lower Horne Creek	Stony riffle	76	> 80
Lower Kaikorai Stream	Stony riffle	70	> 80
Lower Taieri River	Weedy/muddy pools	69	> 70
Lower Waipori River	Weedy/muddy pools	68	> 70
Lower Tokomairiro River	Weedy/muddy pools	69	> 70
Lower Owaka River	Stony run	76	> 80
Lower Waiareka Creek	Weedy/muddy pools	68	> 70
Lower Kaihiku Stream	Stony riffle	74	> 80
Lower Wairuna River	Stony riffle	79	>80

2 Mining privileges in respect of water (deemed permits)

A number of Otago water bodies are subject to the taking of water through the exercising of mining privileges in respect of water (“mining privileges” for short, but now known as “deemed permits”). Mining privileges were issued under the Mining Act 1926, and earlier mining legislation, and provided for the taking, damming and discharging of water. However, as gold mining declined, this water was increasingly used for irrigation. The Crown acquired a number of the higher priority, significant mining privileges which were being used for irrigation schemes, and these were then disposed of to the community irrigation groups.

Under Section 413 of the Resource Management Act, all mining privileges were deemed to become either a water permit (for the taking or damming of water), or a discharge permit (for the discharge of contaminants) on the same terms and conditions as the original mining privilege. Under Section 415 and 416 of the Act, compensation must be paid for the acquisition of any such deemed permit, or any restriction of its ability to be exercised.

As provided by Section 413(3), deemed permits expire on 1 October 2021, the thirtieth anniversary of the date of commencement of the Act, at which time they will lose their priority and there shall no longer be any liability for compensation as a result of loss or restriction of the rights. After 1 October 2021, resource consent is required in place of a deemed permit to take water and Section 124 of the Act applies.

Deemed permits can, however, be restricted by an abatement notice, enforcement order or by a Water Shortage Direction issued under Section 329 of the Resource Management Act.

2A Water management groups

Water management groups, established in terms of Policy 6.4.12A, provide the opportunity for groups to become more responsible for managing their taking by allowing for individual or shared consents to be managed by the group. Lists 2A.1 and 2A.2 set out the Council's requirements for the approval and features of such groups. The form of the group is not otherwise limited by the Council and the group may also exercise other roles to meet member needs.

2A.1 List of criteria for approval of a water management group

For a group to be approved by the Council as a water management group with authority and responsibility for specified resource consents (including deemed permits), the Council must be satisfied that:

- (a) A schedule has been provided that specifies the resource consents which are to be managed by the water management group; and
- (b) The water management group has an appropriate form and rules; and
- (c) The water management group seeks to be granted authority and responsibility to manage the specified consents; and
- (d) The water management group is able to provide documentary evidence that their members, including scheduled consents holders, agree to be bound by the group.

2A.2 Other features of a water management group

A water management group which has been approved by the Council in terms of List 2A.1 above:

- (a) May have a terminating date or criteria;
- (b) May apply to have other resource consents included within its management;
- (ba) May have the whole or any part of the interest in a consent transferred to it;
- (c) Must have amendments of its form and rules approved by the Council;
- (d) May have its authority to manage the specified consents revoked, in part or in full, either;
 - (i) On its request; or
 - (ii) On receipt of not less than 6 months' written notice by the Council;
- (e) Must report annually to the Council on the operation of the group; and
- (f) May have a rationing regime approved by the Council.

Note: This Appendix is reproduced from the Ngai Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

3 Ngai Tahu Claims Settlement Act Statutory Acknowledgements

Introduction

Statutory acknowledgements are recorded in the Ngai Tahu Claims Settlement Act 1998 (the NTCS Act) for several water bodies, mountains and coastal features in the Otago Region.

The following pages contain the text from the Schedules to the NTCS Act (as extracted from Brookers New Zealand Statutes) that describe the statutory acknowledgement sites that occur in Otago. Each schedule contains:

- The statutory area involved,
- A standard preamble,
- A description of the Ngai Tahu association with the site, and
- Standard statements of purposes, and limitations on effect, of the statutory acknowledgement.

These acknowledgements comprise a statement made by Te Runanga o Ngai Tahu of the particular cultural, spiritual, historic and traditional association of Ngai Tahu (Kai Tahu) with these areas.

Part 12 of the NTCS Act provides details of statutory acknowledgements, and the responsibilities relating to them. Section 208 of that act requires that local authorities have regard to these statutory acknowledgements in resource consent processing under Sections 93 to 94(C) of the Resource Management Act 1991 (Notification of resource consents), in deciding whether Te Runanga o Ngai Tahu is a person who may be adversely affected by the granting of a resource consent for activities within, adjacent to or impacting directly on the statutory area.

Section 211 of the NTCS Act enables Ngai Tahu to cite these acknowledgements in submissions, or in proceedings before consent authorities or the Environment Court. In these proceedings, the contents of the 'Ngai Tahu association with the site' part of the acknowledgement in question is not binding on the consent authority (e.g. the Regional Council), but may be taken into account.

Section 220 of the NTCS Act requires that all regional policy statements, district plans and regional plans have information recording those statutory acknowledgements for areas covered by the policy statement or plan attached to them. The attachment of this information may be by way of reference, or be set out in full (as is the case here). This is for the purpose of public information only and does not form part of the policy statement or plan.

APPENDIX 3: NGAI TAHU CLAIMS SETTLEMENT
ACT STATUTORY ACKNOWLEDGEMENTS

Note: This Appendix is reproduced from the Ngai Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

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Note: This Appendix is reproduced from the Ngai Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

SCHEDULE 62

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR TITITEA (MOUNT ASPIRING)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the mountain known as Tititea (Mount Aspiring), located in the Mount Aspiring National Park, as shown on Allocation Plan MS 2 (SO 24665).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Tititea as set out below.

Ngai Tahu Association with Tititea

As with all principal maunga (mountains), Tititea is imbued with the spiritual elements of Raki and Papa, in tradition and practice regarded as an important link to the primeval parents. Tititea is a prominent and majestic peak, clearly visible from a number of vantage points in the south, and its role in Ngai Tahu's creation stories gives rise to its tapu status. From the heights above Te Ana-au (Lake Te Anau), it is a particularly impressive sight when the sun is setting.

The most common Ngai Tahu name for the mountain known to Pakeha as Mount Aspiring is Tititea, referring to the mountain's white peak. It is not unusual, however, for places and physical features to have more than one name, reflecting the traditions of the successive iwi who peopled the land. Other names for the mountain include 'Makahi Ta Rakiwhanoa' (referring to a wedge belonging to Tu Te Rakiwhanoa) and 'Otapahu', which may refer to a type of dogskin cloak.

The Bonar Glacier is known as Hukairoroa Ta Parekiore (which refers to the long, hard glacial ice and crevasses formed by Parekiore). Parekiore was a giant who used to stalk up and down the South and North Islands taking titi (muttonbirds) northwards and returning with kumara. The lakes represent his footprints and the frozen splashes from his footsteps in the south were transformed into glaciers.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

The area was part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land.

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The mauri of Tititea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Tititea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Tititea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Tititea as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Tititea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Tititea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

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Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Tititea.

SCHEDULE 51

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR PIKIRAKATAHI (MOUNT EARNSLAW)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the area known as Pikirakatahi (Mount Earnslaw), as shown on Allocation Plan MS 4 (SO 24666).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Pikirakatahi as set out below.

Ngai Tahu Association with Pikirakatahi

The creation of Pikirakatahi (Mt Earnslaw) relates in time to Te Waka o Aoraki, and the efforts of Tu Te Rakiwhanoa. It is said that during its formation a wedge of pounamu was inserted into this mountain, which is the highest and most prominent peak in this block of mountains. The mountain is also linked to the travels of Rakaihautu, who dug out the great lakes of the interior with his ko (a tool similar to a spade), known as Tu Whakaroria and later renamed Tuhiraki at the conclusion of the expedition.

The origins of the name 'Pikirakatahi' have been lost, but it is known that many places and physical features have more than one name, reflecting the traditions of the successive iwi who peopled the land. It is, however, likely that the name relates to Rakaihautu or subsequent people, as most of the prominent lakes, rivers and mountains of the interior take their name from the journey of Rakaihautu.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

Pikirakatahi was of crucial significance to the many generations that journeyed to that end of Whakatipu-wai-maori (Lake Wakatipu) and beyond. Staging camps for the retrieval of pounamu were located at the base of the mountain, while semi-permanent settlements related to the pounamu trade were located closer to the lake.

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Pikirakatahi stands as kaitiaki (guardian) over the pounamu resource and marks the end of a trail, with the tohu (marker) to the pounamu resource sitting opposite on Koroka (Cosmos Peak). The tupuna (ancestors) had considerable knowledge of whakapapa, traditional trails, places for gathering kai (food) and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The retrieval of large amounts of pounamu from this source, so far inland and over a range of physical barriers, attests to the importance of this resource to the economy and customs of the iwi over many generations. The people would also gather native birds for kai, and firewood with which to cook and provide warmth, from the forests covering the lower flanks of Pikirakatahi. Strategic marriages between hapu strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the mountain. It is because of these patterns of activity that Pikirakatahi continues to be important to runanga located in Otago, Murihiku and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure, Te Runanga o Ngai Tahu.

The mauri of Pikirakatahi represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with Pikirakatahi.

Purposes of Statutory Acknowledgement

Pursuant to section 212, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Pikirakatahi, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);
- (c) To empower the Minister responsible for management of Pikirakatahi or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Pikirakatahi as provided in section 211 (clause 12.2.5 of the deed of settlement).

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Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Pikirakatahi (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Pikirakatahi.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Pikirakatahi.

SCHEDULE 30

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR LAKE HAWEA

Statutory Area

The statutory area to which this statutory acknowledgement applies is the lake known as Hawea, the location of which is shown on Allocation Plan MD 37 (SO 24718).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Lake Hawea, as set out below.

Ngai Tahu Association with Lake Hawea

Hawea is one of the lakes referred to in the tradition of 'Nga Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatu (Nelson). From Whakatu, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu

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taking another southwards by an inland route. On his inland journey southward Rakaihautu used his famous ko (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Hawea.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

The name Hawea may derive from Hawea, tupuna (ancestor) of the Waitaha hapu, Ngati Hawea.

Hawea was traditionally noted as a rich tuna (eel) fishery, with many thousands of the fish once being caught, preserved and transported back to the kainga nohoanga (settlements) of coastal Otago.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Hawea, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The mauri of Hawea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of Life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Hawea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Lake Hawea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Lake Hawea as provided in section 211 (clause 12.2.5 of the deed of

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settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Lake Hawea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Hawea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Hawea.

SCHEDULE 36

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR LAKE WANAKA

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Lake known as Wanaka, the location of which is shown on Allocation Plan MD 38 (SO 24719).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Lake Wanaka, as set out below.

Ngai Tahu Association with Lake Wanaka

Wanaka is one of the lakes referred to in the tradition of 'Nga Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe

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at Whakatu (Nelson). From Whakatu, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward Rakaihautu used his famous ko (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Wanaka.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

The name 'Wanaka' is considered by some to be a South Island variant of the word 'wananga' which refers to the ancient schools of learning. In these schools Ngai Tahu tohunga (men of learning) would be taught whakapapa (genealogies) which stretched back to over a hundred generations and karakia incantations) for innumerable situations. All of this learning they would be required to commit to memory.

Wanaka was traditionally noted as a rich tuna (eel) fishery, with many thousands of the fish once being caught, preserved and transported back to the kainga nohoanga (settlements) of coastal Otago.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Wanaka, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

In 1836 an eeling party was attacked by Te Puoho, a rangatira (chief) of the North Island Ngati Tama iwi. Te Puoho had plans of conquering Te Wai Pounamu, beginning his campaign at the southern end of the island. He compared his strategy to boning an eel which is started at the tail end of the fish. Having travelled down Te Tai Poutini (the West Coast) to Jackson Bay, Te Puoho crossed Haast Past into Wanaka and Lake Hawea where he found a Ngai Tahu eeling party which he captured at Makarora. Two infant girls were captured and eaten. Te Puoho suspected this family was an outpost and so he gave instructions for two guards to follow a young teenager called Pukuharuru who was ordered to show them where the main camp was. However, Pukuharuru managed to escape after dark and alert his father, Te Raki. Te Raki killed the two guards, who were lost without their guide, and the Wanaka families managed to escape the region.

Te Puoho continued his campaign at Tukurau where there were other families fishing. However, some of the people managed to escape to Tiwai Point near Bluff where they lit a warning fire. This fire alerted the southern forces and, under the leadership of Tuhawaiki, Ngai Tahu prepared to meet Te Puoho at Tukurau. After discussing the situation with the tohunga, Ngai Tahu were assured of victory. While

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the priests chanted their karakia to the gods of war, the heart of the enemy chief appeared before Ngai Tahu in the firelight, carried by the wings of a bird. With this omen that the gods of war were on the side of Ngai Tahu, they attacked Te Puoho the next morning.

Te Puoho was shot by a young Ngai Tahu called Topi and his army was taken captive. The head of Te Puoho was cut from his body and stuck on a pole facing his home in the north. Wanaka is therefore noted in history for its part in what was to be the last battle between North and South Island tribes.

The mauri of Wanaka represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Wanaka, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Lake Wanaka or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Lake Wanaka as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Lake Wanaka (as described in this statutory acknowledgement) than that

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person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Wanaka.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Wanaka.

SCHEDULE 75

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR WHAKATIPU WAI MAORI (LAKE WAKATIPU)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Lake known as Whakatipu-wai-maori (Lake Wakatipu), the location of which is shown on Allocation Plan MD 39 (SO 24720).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Whakatipu-wai-maori, as set out below.

Ngai Tahu Association with Whakatipu-wai-maori

The name Whakatipu-wai-maori originates from the earliest expedition of discovery made many generations ago by the tupuna Rakaihautu and his party from the Uruao waka. Rakaihautu is traditionally credited with creating the great waterways of the interior of the island with his famous ko (a tool similar to a spade), known as Tu Whakaroria and renamed Tuhiraki at the conclusion of the expedition.

There are many traditions relating to the lake. One of the most famous tells that the hollow which forms the bed of the lake was created when the people known as Te Rapuwai came upon the giant tipua (ogre) Matau as he lay there in a deep sleep. Matau had been responsible for the disappearance of many small hunting parties and had entrapped a beautiful maiden, Manata. The father of Manata offered her in marriage to the man who could bring her safely home. Matakauri, who was in love with Manata ventured forth, discovering that Matau slept when the northwest wind blew. Matakauri selected a day when the wind was blowing the right way and set forth. He found Manata and, using his mere, he attempted to sever the bonds which

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held her, but try as he would he failed. Manata began to sob bitterly, and as her tears fell on the cords, they melted away. Matakauri carried Manata back to the village where they became man and wife. However, Matakauri knew that while Matau lived no maiden was safe, so he set forth when again the northwest wind blew, and set fire to the large growth of bracken that acted as a bed for the giant. Matau was smothered in flames, the fat from his body augmenting the fire, until the blaze was so fierce that it burned a hole more than 1,000 feet deep. The snow on the surrounding hills melted and filled the hole, which is known today as Lake Wakatipu.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

Whakatipu-wai-maori once supported nohoanga and villages which were the seasonal destinations of Otago and Murihiku (Southland) whanau and hapu for many generations, exercising ahi ka and accessing mahinga kai and providing a route to access the treasured pounamu located beyond the head of the lake. Strategic marriages between hapu strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the lake. It is because of these patterns of activity that the lake continues to be important to runanga located in Murihiku, Otago and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure Te Runanga o Ngai Tahu.

The lake also supported permanent settlements, such as the kaika (village) Tahuna near present-day Queenstown, Te Kirikiri Pa, located where the Queenstown gardens are found today, a Ngati Mamoe kaika near the Kawarau Falls called O Te Roto, and another called Takerehaka near Kingston. The Ngati Mamoe chief Tu Wiri Roa had a daughter, Haki Te Kura, who is remembered for her feat of swimming across the lake from Tahuna, a distance of some three kilometres.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

A key attraction of the lake was the access it provided to seasonal campsites and the pounamu located at the head of the lake at the Dart and Routeburn River catchments, from which countless generations gathered inaka and koko-takiwai pounamu and transported it back to coastal settlements for fashioning into tools, ornaments and weapons.

Waka and mokihi were the key modes of transport for the pounamu trade, travelling the length and breadth of Whakatipu-wai-maori. Thus there were numerous

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tauranga waka (landing places) on the lake and the islands upon it (Matau and Wawahi-waka). The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the lake. The lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the roto (lake).

Whakatipu-wai-maori is an important source of freshwater, the lake itself being fed by hukawai (melt waters). These are waters with the highest level of purity and were accorded traditional classifications by Ngai Tahu that recognised this value. Thus it is a puna (spring) which sustains many ecosystems important to Ngai Tahu. The mauri of Whakatipu-wai-maori represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakatipu-wai-maori as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Whakatipu-wai-maori or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Whakatipu-wai-maori as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity

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under any statute, regulation, or bylaw; and

- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Whakatipu-wai-maori (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakatipu-wai-maori.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakatipu-wai-maori.

SCHEDULE 61

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR TE WAIRERE (LAKE DUNSTAN)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the lake known as Te Wairere (Lake Dunstan), the location of which is shown on Allocation Plan MD 490 (SO 24729)

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Te Wairere as set out below.

Ngai Tahu Association with Te Wairere

The name 'Te Wairere' refers to the speed with which the river once ran at this point.

The whole of the Mata-au (Clutha River), on which Te Wairere lies, was part of a mahinga kai trail that led inland and was used by Otago hapu including Kati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The river was used as a highway into the interior, and provided many resources to sustain travellers on that journey. The river was a significant indigenous fishery, providing tuna (eels), kanakana (lamprey) and kokopu in the area over which Te Wairere now lies. Manu

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(birds), including moa, were taken from areas adjoining the river, over which the lake now lies.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The waterway was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Because of its location at the confluence of Mata-au and Kawarau Rivers, Te Wairere was an important staging post on journeys inland and down-river. A tauranga waka and nohanga sited at the junction of the two rivers acted as such a staging post. As a result of this history of use and occupation there are a number of wahi taonga (including rock shelters and archaeological sites) in the area, some of which are now under the waters of the lake. Wahi tapu are important as places holding the memories and traditions of Ngai Tahu tupuna.

The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The waterway was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the waterway.

The mauri of Te Wairere represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Wairere, as provided in sections 208 to

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210 (clause 12.2.4 of the deed of settlement); and

- (c) To empower the Minister responsible for management of Te Wairere or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Te Wairere as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Te Wairere (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Wairere.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Wairere.

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SCHEDULE 22

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR KA MOANA HAEHAE (LAKE ROXBURGH)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the lake known as Ka Moana Haehae (Lake Roxburgh), the location of which is shown on Allocation Plan MD 491 (SO 24730).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Ka Moana Haehae, as set out below.

Ngai Tahu Association with Ka Moana Haehae

The name Ka Moana Haehae refers to the joining of two waterways. In this case it refers to the confluence of the Mata-au and Manuherikia Rivers over which the lake lies.

The whole of the Mata-au (Clutha River), on which Ka Moana Haehae lies, was part of a mahinga kai trail that led inland and was used by Otago hapu including Ngati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The river was used as a highway into the interior, and provided many resources to sustain travellers on that journey. The river was a significant indigenous fishery, providing tuna (eels), kanakana (lamprey) and kokopu in the area over which Ka Moana Haehae now lies. Manu (birds), including moa, were taken from areas adjoining the river, over which the lake now lies.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The waterway was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Thus there were numerous tauranga waka (landing places) along it. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The waterway was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues

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to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the waterway.

The mauri of Ka Moana Haehae represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ka Moana Haehae, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Ka Moana Haehae or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Ka Moana Haehae as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Ka Moana Haehae (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ka Moana Haehae.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

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Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ka Moana Haehae.

SCHEDULE 40

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR MATA-AU (CLUTHA RIVER)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the River known as Mata-au (Clutha River), the location of which is shown on Allocation Plan MD 122 (SO 24727).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to the Mata-au, as set out below.

Ngai Tahu Association with the Mata-au

The Mata-au river takes its name from a Ngai Tahu whakapapa that traces the genealogy of water. On that basis, the Mata-au is seen as a descendant of the creation traditions. For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

On another level, the Mata-au was part of a mahinga kai trail that led inland and was used by Otago hapu including Ngati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The river was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Thus there were numerous tauranga waka (landing places) along it. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The river was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including

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camping overnight and gathering kai. Knowledge of these trails continue to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Mata-au is where Ngai Tahu's leader, Te Hautapunui o Tu, established the boundary line between Ngai Tahu and Ngati Mamoe. Ngati Mamoe were to hold mana (authority) over the lands south of the river and Ngai Tahu were to hold mana northwards. Eventually, the unions between the families of Te Hautapunui o Tu and Ngati Mamoe were to overcome these boundaries. For Ngai Tahu, histories such as this represent the links and continuity between past and present generations, reinforce tribal identity, and document the events which shaped Ngai Tahu as an iwi.

Strategic marriages between hapu further strengthened the kupenga (net) of whakapapa, and thus rights to travel on and use the resources of the river. It is because of these patterns of activity that the river continues to be important to runanga located in Otago and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure, Te Runanga o Ngai Tahu.

Urupa and battlegrounds are located all along this river. One battleground, known as Te Kauae Whakatoro (downstream of Tuapeka), recalls a confrontation between Ngai Tahu and Ngati Mamoe that led to the armistice established by Te Hautapunui o Tu. Urupa are the resting places of Ngai Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently protected by secret locations.

The mauri of Mata-au represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Mata-au, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of the Mata-au or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of

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Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to the Mata-au as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to the Mata-au (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Mata-au.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Mata-au.

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SCHEDULE 52

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR POMAHAKA RIVER

Statutory Area

The statutory area to which this statutory acknowledgement applies is the River known as Pomahaka, the location of which is shown on Allocation Plan MD 12 (SO 24726).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to the Pomahaka River, as set out below.

Ngai Tahu Association with the Pomahaka River

The Pomahaka was an important mahinga kai for Ngati Mamoe and Ngai Tahu kainga (settlements) in the Catlins and Tautuku areas. The river was particularly noted for its kanakana (lamprey) fishery. Other mahinga kai associated with the river included weka and other manu (birds).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Pomahaka, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The mauri of the Pomahaka represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Pomahaka River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);

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- (c) To empower the Minister responsible for management of the Pomahaka River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to the Pomahaka River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to the Pomahaka River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Pomahaka River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Pomahaka River.

SCHEDULE 23

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR KAKAUNUI RIVER

Statutory Area

The statutory area to which this statutory acknowledgement applies is the River known as Kakaunui, the location of which is shown on Allocation Plan MD 120 (SO 24725).

Preamble

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Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to the Kakaunui River, as set out below.

Ngai Tahu Association with the Kakaunui River

The creation of the Kakaunui relates in time to Te Waka o Aoraki, and the further shaping of the island by Tu Te Rakiwhanoa and his assistants including Marokura who stocked the waterways and Kahukura, who stocked the forests. For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi. The origin of the name 'Kakaunui' has been lost, but is likely to refer to swimming in the river.

There was a tauranga waka (landing place) at the mouth of the Kakaunui, which was an important part of the coastal trails north and south. The river was also a part of the seasonal trail of mahinga kai and resource gathering and hapu and whanau bonding. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The Kakaunui was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Kakaunui was a noted indigenous fishery, offering tuna (eel), inaka (whitebait), kanakana (lamprey), kokopu and other species. Other materials provided by the river included raupo, harakeke and watercress. The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Kakaunui, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

These mahinga kai resources supported both semi-permanent and seasonal occupations, including a kainga on the northern bank of the river near Maheno. The surviving rock art remnants and rock shelters are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

The mauri of the Kakaunui represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the river.

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Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Kakaunui River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of the Kakaunui River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to the Kakaunui River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to the Kakaunui River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Kakaunui River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Kakaunui River.

SCHEDULE 70

Sections 205 and 206

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STATUTORY ACKNOWLEDGEMENT FOR WAIHOLA/WAIPORI WETLAND

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Wetland known as Waihola/Waipori, the location of which is shown on Allocation Plan MD 55 (SO 24721).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Waihola/Waipori, as set out below.

Ngai Tahu Association with Waihola/Waipori

The Waihola/Waipori wetlands were once one of the most significant food baskets in the Otago region, and featured in the seasonal activity of the coastal settlements as far away as the Otago Peninsula and harbour area, Purakaunui and Puketeraki. The wetlands were once much larger in water area and deeper than at present, connected by a labyrinth of waterways and having a gravel bed which has now been overlaid by silt and mud.

The names Waihola/Waipori are likely of Waitaha derivation, with 'hola' being the Waitaha form of 'hora' meaning flat, spread out or widespread. Waipori may in fact be a misrecording of Waipouri, which is used in many older manuscripts, being a reference to the dark, tanin-stained water the wetland receives from Waipori River, a heavily wooded catchment.

The Waihola/Waipori area was visited and occupied by Waitaha, Ngati Mamoe and Ngai Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of Ngai Tahu Whanui. The wetland supported a number of pa within its environs and nearby. For example, Whakaraupuka, the pa of the Ngati Mamoe chief Tukiauau was located in the area now known as Sinclair Wetlands, although Tukiauau eventually relocated further to the south as the southward movement of his Ngai Tahu foes became uncomfortably close.

There were also many nohoanga (temporary campsites) located within the complex, used by food gathering parties which would travel to the lakes and camp on the fringes for two to three days to gather kai; to eel, hunt water fowl and gather flax. There were also permanent or semi-permanent settlements located in a number of locations around the lakes, some on islands in the wetlands system.

A number of other settlements further afield were also dependent on the mahinga kai resources of Waihola/Waipori for sustenance, including Tu Paritaniwha Pa near Momona, Omoua Pa above Henley, Maitapapa (Henley area), the kaik south of Henley and Takaaihitau near the old Taieri Ferry bridge, in addition to other settlements adjacent to the Taieri River up and downstream of the wetlands. Otakou

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and Puketeraki hapu would also make seasonal visits to gather resources and strengthen and maintain the kupenga (net) of whakapapa on which their rights to use those resources were based.

There is an account which tells of a sudden flood which required people trapped on the bank at a place called Whakaraupo, on the network of waterways that link Waihola with Waipori, to hastily construct a mokihi out of raupo to reach safety. A meeting place was opened here in 1901 by the locals, the house was named Te Waipounamu.

For Ngai Tahu, histories such as these reinforce tribal identity and solidarity and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

Waihola/Waipori was a key mahinga kai resource for Ngai Tahu based along the Otago coastal region, where an abundance of tuna (eel), inaka (whitebait), patiki (flounder) and other indigenous fish were available. Waterfowl and fibre resources such as harakeke and raupo were also easily accessible from the wetlands. Spearing, setting hinaki and nets, and bobbing for eel were regular activities on the wetlands in the season. The gathering of young ducks in the moult, and the catching of herons, pukeko and other birds supplemented the broad range of kai available from the wetlands.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Waihola/Waipori, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The attractiveness of Waihola/Waipori as a mahinga kai was enhanced by their accessibility. With the direct link to the Taieri River, access via the Taieri to villages on the banks of the Taieri River, upstream and down, and access by waka to the coast and northward to Otagou, kai and other resources gathered from the wetlands could be transported back to these home bases with relative ease.

The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the wetlands. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands.

Because of the long history of use of Waihola/Waipori as a mahinga kai, supporting permanent and temporary settlements, there are numerous urupa, wahi tapu and wahi taonga associated with the wetlands. These are all places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently

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protected by secret locations. Urupa are the resting places of Ngai Tahu tupuna and, as such, are a particular focus for whanau traditions.

The mauri of Waihola/Waipori represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the wetlands. The wetlands represent, in their resources and characteristics, a strong element of identity for those who had manawhenua (tribal authority over the area) whose tupuna were nurtured on the food and resources of the wetlands for generations.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Waihola/Waipori, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Waihola/Waipori or the Commissioner of Crown Lands, as the case may be,) to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Waihola/Waipori as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Waihola/Waipori (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Waihola/Waipori.

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Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Waihola/Waipori.

SCHEDULE 60

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR TE TAURAKA POTI (MERTON TIDAL ARM)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Wetland known as Te Tauraka Poti (Merton Tidal Arm), the location of which is shown on Allocation Plan MD 56 (SO 24722).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Te Tauraka Poti, as set out below.

Ngai Tahu Association with Te Tauraka Poti

Te Tauraka Poti, fed by the streams known as Kirikiri Whakahoro and Kokonui, was a major mahinga kai for kainga and pa located on the coast north of the Otago Peninsula. The wetlands were a rich source of kai, including tuna (eels), mohoa (black flounder), giant kokopu and water fowl. The wetlands were particularly valued as a spawning ground for inaka (whitebait).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Te Tauraka Poti, the relationship of people with the wetland and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

As a result of this history of use, there are a number of wahi taonga within the wetland area, including middens and other evidence of occupation. These are important as places holding the memories of Ngai Tahu tupuna.

Te Tauraka Poti formed an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai.

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Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetland.

Much of Te Tauraka Poti's continuing significance to Ngai Tahu lies in the fact that it is the only remaining wetland area of any significance in the vicinity. The mauri of Te Tauraka Poti represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the wetland.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Tauraka Poti, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);
- (c) To empower the Minister responsible for management of Te Tauraka Poti or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Te Tauraka Poti as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Te Tauraka Poti (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Tauraka Poti.

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Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Tauraka Poti.

SCHEDULE 28

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR KURAMEA (LAKE CATLINS)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Lake known as Kuramea (Lake Catlins), the location of which is shown on Allocation Plan MD 134 (SO 24728).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Kuramea, as set out below.

Ngai Tahu Association with Kuramea

Kuramea is the traditional name for the waterway now known as Catlins Lake.

The lake and estuary were significant sources of mahinga kai, supporting a number of nohoanga (settlements) in the vicinity. Tuna (eels), inaka (whitebait), tuaki (cockles), pupu (mudsnails), pipi and flatfish were taken from Kuramea. The lake was also a source of raranga (weaving) materials including harakeke and paru (mud used in dying).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Kuramea, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

As a result of this history of use, there are a number of wahi taonga within the wetland area, including middens and other evidence of occupation. These are important as places holding the memories of Ngai Tahu tupuna. In particular, a number of archaeological finds within the wetlands confirm the area's history as a wake (canoe) building area.

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The mauri of Kuramea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Kuramea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Kuramea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Kuramea as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Kuramea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Kuramea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Kuramea.

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SCHEDULE 41

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR MATAKAEA (SHAG POINT)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the area known as Matakaea Recreation Reserve and Onewhenua Historic Reserve, as shown on Allocation Plan MS 9 (SO 24686).

Preamble

Under section 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Matakaea.

Ngai Tahu Association with Matakaea

The name Matakaea recalls the tradition of the Arai Te Uru canoe, which capsized off Moeraki. From Moeraki, the crew managed to swim ashore leaving the cargo to be taken ashore by the waves. The crew members fled inland and were transformed into the mountains which form the Southern Alps.

The Arai Te Uru tradition is also important because it explains the origins of kumara. The story originally began with Roko i Tua who came to Aotearoa and met the Kahui Tipua. The Kahui Tipua gave Roko i Tua mamaku (tree fern) to eat. However Roko i Tua preferred the kumara that he had in his belt which he took out and soaked in a bowl of water. The Kahui Tipua tasted the kumara and asked where it was from. Roko i Tua replied saying that the kumara came from 'across the sea'.

The Kahui Tipua then made a canoe and, under the leadership of Tu Kakariki, went to Hawaiiiki and returned with the kumara to Aotearoa. The Kahui Tipua planted the kumara but the crop failed. However, Roko i Tua had also sailed to Hawaiiiki on the canoe called Arai Te Uru. Roko i Tua landed at Whangara, Hawaiiiki, and learnt the karakia (incantations) and tikanga (customs) connected with planting kumara. Roko i Tua then gave his canoe to two crew members called Pakihiwitahi and Hape ki Tua Raki. The Arai Te Uru returned under the leadership of these two commanders and eventually foundered off the Moeraki Coast at Matakaea.

For Ngai Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

The Matakaea area has been occupied for many centuries and is the site of numerous urupa and wahi tapu. Urupa are the resting places of Ngai Tahu tupuna (ancestors)

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and, as such, are the focus for whanau traditions. Urupa and wahi tapu are places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently protected by secret locations.

The mauri of Matakaea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Matakaea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Matakaea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Matakaea as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Matakaea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Matakaea.

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Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Matakaea.

SCHEDULE 64

Sections 205 and 206

STATUTORY ACKNOWLEDGEMENT FOR TOKATA (THE NUGGETS)

Statutory Area

The statutory area to which this statutory acknowledgement applies is the area known as Tokata (The Nuggets), as shown on Allocation Plan MS 10 (SO 24699).

Preamble

Under sections 206, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Tokata as set out below.

Ngai Tahu Association with Tokata

The creation and shaping of Tokata and the surrounding coastline relates in time to Te Waka o Aoraki, and the subsequent efforts of Tu Te Rakiwhanoa. The name Tokata is a reference to the Nuggets, however, the individual nuggets also carry their own names: Te Ana Puta has a cave in it, Pae Koau is frequented by shags, three small nuggets on the north side are known collectively as Makunui and support a large seal colony, while the nugget furthest out to sea is Porokaea. The hill on which the lighthouse stands is known to Ngai Tahu as Taumata o Te Rakipokia, and a cave on the north side of this hill is Te Ana o Katiwairua. For Ngai Tahu, such traditional names and their associated histories reinforce tribal identity and solidarity, and continuity between generations, and document the events that have shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

The great explorer Rakaihautu passed by this area of the Otago coast on his journey northward, and the area was subsequently visited and occupied by Waitaha, Ngati Mamoe and Ngai Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of Ngai Tahu Whanui. This area of the Otago coast has many reminders of the uneasy relationships that once existed between Ngati Mamoe and Ngai Tahu. Skirmishes between the two iwi occurred intermittently just to the north. However, one battle occurred within the area referred to as Tokata after which some of the fallen were cooked. As a result of this activity, this area is now a wahi tapu. Such wahi tapu are the resting places of Ngai Tahu tupuna (ancestors) and, as such, are the focus for whanau traditions. These are

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places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently protected by secret locations.

Tokata is a significant physical marker on the South Otago coast, with waka (canoes) voyaging south and north, or out to sea on fishing expeditions utilising it as a bearing marker. It also acted as a pointer to the safe tauranga waka (landing place) in Kaimataitai Bay, just to the north. The tupuna had an intimate knowledge of navigation, sea routes, safe harbours and landing places, and the locations of food and other resources on the coast. Tokata therefore formed an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and sea. Tokata also marks the south-eastern boundary of the Otakou Sale Deed area, marked out in 1844.

A variety of mahinga kai (principally kaimoana - seafood) is available at Tokata. The extensive rocky intertidal zone provides paua, kutai (mussels) and koura (crayfish) in abundance. The fur seal, leopard seal and sea lion all rest here, with their pups forming a ready source of kai in days gone by. Gull eggs, koau (shags) and titi (muttonbirds) were also harvested in the area. An excellent rimurapa (kelp) resource was utilised for making poha (storage bags), capable of preserving the titi for up to two years. Excellent fishing grounds seaward of Tokata supplied the resources of the coast.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the land and sea, the relationship of people with the coastline and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

The mauri of Tokata represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory

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acknowledgement in relation to Tokata, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

- (c) To empower the Minister responsible for management of Tokata or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Tokata as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Tokata (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Tokata.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Tokata.

SCHEDULE 103

Sections 205, 312 and 313

STATUTORY ACKNOWLEDGEMENT FOR TE TAI O ARAI TE URU (OTAGO COASTAL MARINE AREA)

Specific Area

The statutory area to which this statutory acknowledgement applies is Te Tai o Arai Te Uru (the Otago Coastal Marine Area), the Coastal Marine Area of the Moeraki, Dunedin Coastal and Molyneaux constituencies of the Otago region, as shown on

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SO Plans 24250, 24249, and 24252, Otago Land District and as shown on Allocation Plan NT 505 (SO 19901).

Preamble

Under section 313, the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to Te Tai o Arai Te Uru as set out below.

Ngai Tahu Association with Te Tai o Arai Te Uru

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Ka Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tu Te Rakiwhanoa, who took on the job of making the island suitable for human habitation.

The naming of various features along the coastline reflects the succession of explorers and iwi (tribes) who travelled around the coastline at various times. The first of these was Maui, who fished up the North Island, and is said to have circumnavigated Te Wai Pounamu. In some accounts the island is called Te Waka a Maui in recognition of his discovery of the new lands, with Rakiura (Stewart Island) being Te Puka a Maui (Maui's anchor stone). A number of coastal place names are attributed to Maui, particularly on the southern coast.

The great explorer Rakaihautu travelled overland along the coast, identifying the key places and resources. He also left many place names on prominent coastal features. Another explorer, Tamatea, sailed along the Otago coast in the waka Takitimu. After the waka eventually broke its back off the coast of Murihiku, Tamatea and the survivors made their way overland back to the North Island, arriving at the coast by the place Tamatea named O-amaru (Oamaru).

Place names along the coast record Ngai Tahu history and point to the landscape features which were significant to people for a range of reasons. For example, some of the most significant rivers which enter the coastal waters of Otago include: Waitaki, Kakaunui, Waihemo (Shag), Waikouaiti, Kaikarae (Kaikorai), Tokomairiro, Mata-au (Clutha), Pounaweia (Catlins). Estuaries include: Waitete (Waitati), Otakou (Otago), Makahoe (Papanui Inlet), Murikauhaka (Mate-au and Koau estuaries), Tahaukupu (Tahakopa estuary), Waipatiki (Wapati Estuary). Islands in the coastal area include Okaihe (St Michaels Island), Moturata (Taieri Island), Paparoa, Matoketoke, Hakinikini, and Aonui (Cooks Head).

Particular stretches of the coastline also have their own traditions. The tradition of the waka (canoe) Arai Te Uru and its sinking at the mouth of the Waihemo (Shag River) has led to the coastal area of Otago being known as Te Tai o Araiteuru (the coast of Arai Te Uru). Accounts of the foundering, the wreckage, and the survivors of this waka are marked by numerous landmarks almost for the length of the Otago

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coast. The boulders on Moeraki coast (Kai Hinaki) and the Moeraki pebbles are all associated with the cargo of gourds, kumara and taro seed which were spilled when the Arai Te Uru foundered.

For Ngai Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngai Tahu as an iwi.

Because of its attractiveness as a place to establish permanent settlements, including pa (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngati Mamoe and Ngai Tahu in succession, who, through conflict and alliance, have merged in the whakapapa (genealogy) of Ngai Tahu Whanui. Battle sites, urupa and landscape features bearing the names of tupuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualities and became the headquarters for a succession of rangatira and their followers. Notable pa on the Otago coast include: Makotukutuku (Oamaru), Te Raka-a-hineatea (Moeraki), Te Pa Katata, Pa a Te Wera, (Huriawa Peninsula), Mapoutahi (Purakaunui), Pukekura (Taiaroa Head), Moturata (Taieri Island). The estuaries from the Waitaki River to the Chaslands also supported various hapu.

Tupuna such as Waitai, Tukiauau, Whaka-taka-newha, Rakiiamo, Tarewai, Maru, Te Aparangi, Taoka, Moki II, Kapo, Te Wera, Tu Wiri Roa, Taikawa, Te Hautapanuiotu among the many illustrious ancestors of Ngati Mamoe and Ngai Tahu lineage whose feats and memories are enshrined in the landscape, bays, tides and whakapapa of Otago.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapu located at permanent or semi-permanent settlements along the coast, with an intricate network of mahinga kai (food gathering) rights and networks that relied to a large extent on coastal resources. Chiefs such as Korako (several), Tahatu, Honekai, Ihutakuru, Karetai, Taiaroa, Potiki, Tuhawaiki, and Pokene being some among a number who had their own villages and fishing grounds. Otago Peninsula (Muaupoko) had many kaunga nohoanga with a multitude of hapu occupying them. At one time up to 12 kaunga existed in the lower Otago harbour, some larger and more important than others.

The whole of the coastal area offered a bounty of mahinga kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources including harakeke (flax), fern and ti root. In many areas the reliance on these resources increased after the land sales of the 1840s and 1850s, and the associated loss of access to much traditional land-based mahinga kai.

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Many reefs along the coast are known by name and are customary fishing grounds, many sand banks, channels, currents and depths are also known for their kaimoana. One example is Poatiri (Mt Charles - Cape Saunders) the name of which refers to a fish hook. Poatiri juts out into the Pacific, close to the continental shelf, and is a very rich fishing ground. Another example is Blueskin Bay which was once a kohanga (breeding ground) for the right whale, although it is well over 150 years since it has seen this activity.

Other resources were also important in the coastal area. Paru (black mud used for dying) was obtained from some areas. Some of the permanent coastal settlements, such as those at the mouth of the Mata-au (Clutha River), and at Otakou and Purakaunui, were important pounamu manufacturing sites. Trading between these villages to the south and north via sea routes was an important part of the economy.

The Otago coast was also a major highway and trade route, particularly in areas where travel by land was difficult. Pounamu and titi were traded north with kumara, taro, waka, stone resources and carvings coming south. Travel by sea between settlements and hapu was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plying the waters continuously. Hence tauranga waka (landing places) occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource, rimurapa (bull kelp - used to make the poha, in which titi were and still are preserved) with the sea trail linked to a land trail or mahinga kai resource. The tupuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast.

Numerous urupa are being exposed or eroded at various times along much of coast. Water burial sites on the coast, known as waiwhakaheketupapaku, are also spiritually important and linked with important sites on the land. Places where kaitangata (the eating of those defeated in battle) occurred are also wahi tapu. Urupa are the resting places of Ngai Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the coastal area.

Purposes of Statutory Acknowledgement

Pursuant to section 215 and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

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- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Tai o Arai Te Uru, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Tainui Whanui to cite this statutory acknowledgement as evidence of the association of Ngai Tahu to Te Tai o Arai Te Uru as provided in section 208 (clause 12.2.5 of the deed of settlement).

Limitations on effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngai Tahu's association to Te Tai o Arai Te Uru (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Tai o Arai Te Uru.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights and interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Tai o Arai Te Uru.

Brooker's Editorial Note

It appears that the above reference (in (c) of 'Purposes') to "section 208" should be read as a reference to "section 211" because cl 208 of the Ngai Tahu Claims Settlement Bill, relating to the use of statutory acknowledgement with submissions, became s 211 of this Act.