Plan Change 1C (Water Allocation and Use)

Regional Plan: Water for Otago

Otago Regional Council

1 March 2012
ISBN 978-0-478-37628-9

This is a true and correct copy of Plan Change 1C to the Regional Plan: Water for Otago which was approved by the resolution of the Otago Regional Council on Wednesday, 8 February 2012.

Plan Change 1C to the Regional Plan: Water is deemed to be operative on Thursday, 1 March 2012.

The Common Seal of the Otago Regional Council was hereto affixed pursuant to the resolution of the Council passed on Wednesday, 8 February 2012 in the presence of:

OTAGO REGIONAL COUNCIL
Common Seal

Stephen Woodhead
Chairperson

Graeme Martin
Chief Executive

Introduction

Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water for Otago improves the overall effectiveness of how limited water resources are managed, enabling the community to benefit from future opportunities to use water.

Plan Change 1C (Water Allocation and Use) was publicly notified on Saturday 20 December 2008. Submissions closed on Monday 9 March 2009. Fifty-nine submissions were received, all within the statutory timeframe. The *Summary of Decisions Requested by Submitters* and call for further submissions was notified on Saturday 4 April 2009, with further submissions closing on Tuesday 5 May 2009. Fifteen further submissions were received, all within the statutory timeframe.

Hearings were held on Monday 22 June (Dunedin), Friday 26 June (Oamaru), Monday 29 June (Alexandra), Tuesday 30 June (Cromwell), Wednesday 1 July and Monday 6 July (Dunedin). In total, 41 submitters and further submitters made presentations to the Hearing Committee.

On 24 March 2010, Council made its decision on the plan change. This decision was publicly notified on 10 April 2010.

Six appeals (with nine parties joining the appeals under section 274 of the RMA) were resolved through mediation, approved by Court Order on 1 December 2011. Plan Change 1C (Water Allocation and Use) is operative on 1 March 2012.

The following sections detail the operative provisions of Plan Change 1C (Water Allocation and Use) in order of chapters in the Regional Plan: Water for Otago. Note that where changes are made to the same provisions by subsequent Plan Change 4A (Groundwater and North Otago Volcanic Aquifer), the Plan Change 4A changes are shown, as both plan changes become operative on 1 March 2012. An updated version of the operative Regional Plan: Water, incorporating the plan changes, is also available.

Table of Contents

Regional Plan: Water, as amended by Plan Change 1C:

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

1

Introduction

1.1 to **1.3** *[No change]*

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 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 was made operative on 1 March 2010.

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.

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 builds on the groundwater management system of taking water within a maximum allocation volume, 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 was made operative on 1 March 2012.

1.4.1 *[No change]*

1.5 *[No change]*

2

Legislative and Policy Framework

2.1 *[No change]*

2.2 Relationship to other resource management documents

2.2.1 to **2.2.4** *[No change]*

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 to **2.2.8** *[No change]*

2.3 *[No change]*

5

Natural and Human Use Values of Lakes and Rivers

5.1 to **5.3** *[No change]*

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

5.4.1 to **5.4.5** *[No change]*

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 (Matarua 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 (Matarua River) Order 1997.

5.4.6 to **5.4.13** *[No change]*

5.5 *[No change]*

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 *[No change]*

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 *[No change]*

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 to **6.2.8** *[No change]*

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.

6.3.2 *[No change]*

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 **6.3.7** *[No change]*

6.4 Policies applying to the management of the taking of water

Index to policies in 6.4

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 Maps C1-C17. 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 to **6.4.4** *[No change]*

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 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 and Waipiata 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 Waipiata, and between Waipiata 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 Waipiata, and between Waipiata 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 Waipiata, and between Waipiata 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

6.4.6 to **6.4.7** *[No change]*

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:

Supplementary minimum flow = Assessed actual take + 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.

Groundwater Takes

6.4.10A To enable the taking of groundwater by:

(a) In each aquifer other than any in Schedule 2C or within 100 metres of a connected perennial surface water body, defining a quantity known as the *maximum allocation volume*, which is:

(i) For aquifers in Schedule 4A, the greater of:

(1) A limit specified as the maximum allocation volume in Schedule 4A; or

(2) The sum of assessed maximum annual take for that aquifer at 10 April 2010, less any quantity in a consent where:

(A) All of the water taken is immediately returned to the aquifer or connected surface water body;

(B) The consent has been surrendered or has expired (except where the quantity has been granted to the existing consent holder as a new consent;

(C) The consent has been cancelled (except where the quantity has been transferred to a new consent under Section 136(5));

(D) The consent has lapsed;

(ii) For aquifers other than those in Schedule 4A, the greater of:

(1) A limit which is 50% of the calculated mean annual recharge; or

(2) The sum of consented maximum annual take for that aquifer at 10 April 2010, less any quantity in a consent where:

(A) All of the water taken is immediately returned to the aquifer or connected surface water body;

(B) The consent has been surrendered or has expired (except where the quantity has been granted to the existing consent holder as a new consent;
(C) The consent has been cancelled (except where the quantity has been transferred to a new consent under Section 136(5));
(D) The consent has lapsed; and

(b) In an aquifer other than any in Schedule 2C or within 100 metres of a connected perennial surface water body, applying aquifer restriction levels where specified in Schedule 4B; and
(c) In any aquifer, avoiding contamination of groundwater or surface water; and
(d) In any aquifer, avoiding permanent aquifer compaction.

Explanation
Policy 6.4.1A(a) and (b) provide for the management of connected groundwater as if it were surface water. All water allocated as groundwater in terms of Policy 6.4.1A(c) or (d) needs to be managed for the protection of aquifers and the maintenance of any long term outflows. The outflows from any aquifer need to be maintained to prevent long term depletion of base flow to surface water bodies and prevent seawater intrusion.

Sustainable allocation of groundwater will be achieved by considering as restricted discretionary activities, those applications where:
(i) The individual take would not cause the cumulative take from the aquifer to exceed 50% of the mean annual recharge of the aquifer, or the maximum allocation volume listed in Schedule 4A, unless that take was the subject of a resource consent granted before 10 April 2010; and
(ii) Relevant aquifer restriction levels are met; and
(iii) Aquifer contamination or compaction will be avoided.

For some aquifers identified in Maps C1–C17, maximum allocation volumes are specified in Schedule 4A, where there is sufficient information to set them. Maximum allocation volumes are appropriate for managing the cumulative effects of groundwater takes on long term storage of an aquifer and on outflows to surface water bodies. Matters that will be considered when setting maximum allocation volumes are given in Schedule 4C.1. Significant drawdown effects are addressed under (b) of this policy.

Allocation is available when the assessed maximum annual take is below the limits specified in (a)(i)(1) or (a)(ii)(1) of this policy. Where the assessed maximum annual take reduces below those limits, through surrender, lapse, cancellation or non-replacement on expiry of existing consents, new quantities may be granted. The assessed maximum annual take is calculated using the process outlined in Method 15.8.3.1.

When an existing consent holder applies for a new consent for the same activity, and is able to continue to lawfully exercise the consent under Section 124, that quantity of water retains its status within maximum

allocation volume and may be granted to the new consent. Only where the application is approved does the quantity remain within maximum allocation volume.

Note that where the quantity from an existing consent within maximum allocation volume is transferred to a new consent, calculation of the maximum allocation volume in (a)(i)(2) and (a)(ii)(2) of this policy is based on the quantity specified in the new consent.

When the aquifer levels specified in Schedule 4B are reached, the actual taking of water will be restricted as provided for in the Schedule. Restrictions will apply to all consents to take groundwater under Policy 6.4.1A(c) or (d), including those for community water supply specified in Schedule 3B, as well as permitted taking in accordance with Rule 12.2.2.2. Maps D1–D4 show the Schedule 4B aquifers to which the restrictions apply.

When considering the taking of any groundwater, the adverse effects identified in (c) and (d) of this policy must be avoided.

Principal reasons for adopting
This policy is adopted to ensure that potentially long term or irreversible adverse effects on aquifer properties resulting from taking groundwater are avoided. It is important to achieve this outcome in order to provide for the needs of Otago's present and future generations.

This policy also maintains levels and pressures within identified aquifers. This will assist in achieving the environmental results detailed in Schedule 4B, by avoiding significant reductions.

This policy allows for sustainable taking of groundwater from aquifers, where the take will not have a direct effect on any surface water body, while avoiding adverse effects, including in particular the matters listed in Policies 5.4.2 and 5.4.3. Allocating no more than the limits in the policy ensures the remaining groundwater provides for adequate levels of system outflow.

6.4.10AA Where an application is received to take groundwater within the maximum allocation volume and Policy 6.4.10A(a)(i)(2) or (a)(ii)(2) applies to the aquifer, to grant no more water than has been taken under the existing consent, 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 aquifers where water is only available from within the maximum allocation volume under a new consent for the same activity for which an existing 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 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 assist in the reduction of the maximum allocation volume under Policies 6.4.10A(a)(i)(2) or 6.4.10A(a)(ii)(2) to reflect the amount of water actually being taken. This policy also intends that the taking of groundwater is not constrained by resource consent holders who are underutilising the groundwater allocated to them, improving efficiency of water resource use.

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. Map C15 shows the location of the Lower Taieri Aquifer. Map C9a shows 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. Map C15 shows the location of the Lower Taieri Aquifer. Map C9a shows 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 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 6.4.10AA 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 *[No change]*

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 *[No change]*

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 *[No change]*

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 **6.6.3** *[No change]*

6.6A *[No change]*

6.7 Anticipated environmental results

6.7.1 *[No change]*

6.7.2 People and communities have access to suitable supplies of water for their present and reasonably foreseeable needs.

6.7.3 to **6.7.7** *[No change]*

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.

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 to **9.2.5** *[No change]*

9.3 Objectives

9.3.1 *[No change]*

9.3.2 *[Repealed – 1 March 2012]*

9.3.3 *[No change]*

9.3.4 *[Repealed – 1 March 2012]*

9.3.5 *[No change]*

9.4 Policies

9.4.1 *[No change]*

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.

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 **9.4.21** *[No change]*

9.4.22 *[Repealed – 1 March 2012]*

9.4.23 *[No change]*

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.

11

Introduction to the Rules

11.1 *[No change]*

11.2 Guide to the rules

11.2.1 *[No change]*

11.2.2 *[No change]*

11.2.3 *[No change]*

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	
Water use and management		
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
The discharge of water or contaminants, in terms of:		
• Stormwater	**12.4**	Discharge of stormwater
• Drainage water	**12.5**	Discharge of drainage water
• Human sewage	**12.6**	Discharge of human sewage
• Pesticides	**12.7**	Discharge of pesticides
• Animal dip material	**12.8**	Discharge of agricultural waste and fertiliser
• Collected animal waste	**12.8**	Discharge of agricultural waste and fertiliser
• Feed pads, stand-off pads and sacrifice paddocks	**12.8**	Discharge of agricultural waste and fertiliser
• Fertilisers	**12.8**	Discharge of agricultural waste and fertiliser
• Drilling and bore testing	**12.9**	Discharges from drilling and bore testing
• Vessels	**12.10**	Discharges from vessels
• Water or tracer dye	**12.11**	Discharge of water or tracer dye
• Dams and reservoirs	**12.12**	Discharges from dams and reservoirs
• Other discharges	**12.13**	Discretionary discharge activities
A wetland identified in Schedule 9 or any wetland above 800 metres in altitude	**12.1 – 12.13**	Activities affecting water
A wetland identified in Schedule 10	**12.1.2.6** **12.3.2.2**	Taking of water for land drainage Diversion of water for land drainage
Land use on lake or river beds		
A structure	**13.1** **13.2** **13.3** **13.4**	The use of a structure The erection or placement of a structure The extension, alteration, replacement or reconstruction of a structure Demolition or removal of a structure
Disturbance of the bed of a lake or river	**13.5**	Alteration of the bed of a lake or river
Reclamation of the bed of a lake or river	**13.5**	Alteration of the bed of a lake or river
Deposition of substances onto or into the bed of a lake or river	**13.5**	Alteration of the bed of a lake or river
Vegetation:		
• Introduction of vegetation to the bed of a lake or	**13.6**	The introduction or planting of vegetation

If the activity involves any of the following	See the following rules of the Plan	
river		
• Removal of vegetation from the bed of a lake or river	**13.7**	The removal of vegetation
Land use other than in lake or river beds		
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

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 *[No change]*

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 *[No change]*

11.3.3 *[No change]*

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 An application to take groundwater within the maximum allocation volume in an aquifer where Policy 6.4.10A(a)(i)(2) or (a)(ii)(2) applies, by a person who does not hold the existing consent to take that water, is a ***prohibited*** activity.

12.0.1.4 An application to take groundwater within the maximum allocation volume, where that take would cause the maximum allocation volume of an aquifer to exceed the limits in Policy 6.4.10A(a)(i)(1) or (a)(ii)(1), is a ***prohibited*** activity.

Principal reasons for adopting

These rules are adopted to expressly prohibit more water being allocated as primary allocation, or for groundwater within the maximum allocation volume, when the allocation already exceeds or would exceed the catchment or aquifer limit. Sections 124A-C of the Act cannot apply where no application can be received. Any further taking of surface water or connected groundwater must be from supplementary or further supplementary allocation, in order to assist in maintaining the aquatic ecosystem and natural character of source water bodies. The taking of groundwater beyond maximum allocation volumes is considered only where that take is immediately returned to the aquifer or connected surface water body.

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.

12.1.2 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 Rule 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) The water is not taken from any wetland identified in Schedule 9 or any wetland higher than 800 metres above sea level; 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 100,000 litres per day; and
(e) No take is at a rate greater than 10 litres per second; 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.

12.1.2.5 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) The water is not taken from any wetland identified in Schedule 9 or any wetland higher than 800 metres above sea level; and
(b) No lawful take of water is adversely affected as a result of the taking; and
(c) No take is for a volume greater than 25,000 litres per day at any landholding; and
(d) 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
(e) No back-flow of any contaminated water occurs to the water body; and
(f) Fish are prevented from entering the intake structure; 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 12.1.4.9, 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 [No change]

12.1.3 Controlled activity: Consent required but always granted

12.1.3.1 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
(da) The proposed method of take and delivery of the water taken; 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.

12.1.4 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 12.1.6, 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:
Lake Hayes (Map B1),
Welcome Creek (Map B3),
Kakanui (Map B3),
Waianakarua (Map B3),
Trotters (Map B3),
Shag (Map B3),
Taieri Catchment upstream of Paerau (Map B4),
Taieri Catchment Sutton to Outram (Maps B4 and B5),
Water of Leith (Map B5),
Waitahuna (Map B5), and
Lake Tuakitoto (Map B5):

(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) 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.

(iiA) 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 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 m^3 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) 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.

(iiA) 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.

(iii) 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:
Luggate Catchment (Map B1a),
Manuherikia Catchment Upstream of Ophir (Maps B2 and B4),
Taieri Catchment Paerau to Waipiata (Maps B2 and B4),
Taieri Catchment Waipiata to Tiroiti (Maps B2, B3 and B4); and
Taieri Catchment Tiroiti to Sutton (Maps B3 and B4):

(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) 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) 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.

(iiA) 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.

(iii) 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) 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.

(iiA) 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.

(iii) 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.

(iv) 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) 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.

(ivA) 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.

(v) 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.

(vi) 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 adverse effect on a significant wetland value identified in Schedule 9 or any wetland higher than 800 metres above sea level; and
(xiv) Any financial contribution for Type B wetland values 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.

[Conditions reordered – 1 March 2012]

Notification and written approvals

(a) Applications for resource consent to which this Rule applies, to take and use water from a river, 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, 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 under Section 93 of the Resource Management Act in those circumstances in which the Act allows applications to be considered on a non-notified basis.

(b) Applications for resource consent to which this rule applies, to take and use water from a water body other than a river, 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.

12.1.4.9 The suspension of takes

It is a term of any taking of surface water under Rules 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, and except in the Waitaki catchment, the taking and use of surface water is a ***discretionary*** activity.

12.1.6 Non-complying activities: Resource consent required

12.1.6.1 Except as provided for by Rules 12.1.1.2 to 12.1.5.1 and 12.1.6.2, 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.

12.1.6.2 Except as provided for by Rule 12.1.1.2 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.

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 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.

12.2.2 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

(aa) The water is not taken from any aquifer identified in Schedule 2C; and

(ab) The water is not taken from within 100 metres of any wetland, lake or river; and

(b) *[Repealed - 1 March 2012]*

(c) *[Repealed - 1 March 2012]*

(d) 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 Map C9); and

(ii) Inch Clutha Gravel (as identified on Map C17); and

(e) Except as provided by Condition (d) above, the take is for a volume no greater than 25,000 litres per day, at any landholding, elsewhere in Otago; and

(f) No back-flow of any contaminated water occurs to the aquifer; and

(g) 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 [No change]

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) The water is not taken from any wetland identified in Schedule 9 or any wetland higher than 800 metres above sea level; 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 100,000 litres per day; and
(e) No take is at a rate greater than 10 litres per second; and
(f) No back-flow of any 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.

12.2.2.6 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) The water is not taken from any wetland identified in Schedule 9 or any wetland higher than 800 metres above sea level; and
(b) No lawful take of water is adversely affected as a result of the taking; and
(c) No take is for a volume greater than 25,000 litres per day at any landholding; and
(d) 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
(e) No back-flow of contaminated water occurs to the water body; and
(f) 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 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.

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.

12.2.3 Restricted discretionary activities: Resource consent required

12.2.3.1 *[Repealed – 1 March 2012]*

12.2.3.1A 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 12.2.3.1A, the taking and use of groundwater is a ***restricted discretionary*** activity, if:

(a) The volume sought is within:
    (i) The maximum allocation volume identified in Schedule 4A; or
    (ii) 50% of the calculated mean annual recharge for any aquifer not specified in Schedule 4A; or
    (iii) That specified on a resource consent granted before 10 April 2010, or the take applied for is a volume equal to or less than that on the existing consent; and
(b) It is subject to aquifer restriction levels 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 volume for the aquifer; and
(ii) The mean annual recharge of that aquifer; and
(iii) The effect of the take on the hydrodynamic properties of the aquifer and the vulnerability of the aquifer to compaction
(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 restriction levels 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 adverse effect on a significant wetland value identified in Schedule 9 or any wetland higher than 800 metres above sea level; and

(xvi) Any financial contribution for Type B wetland values 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 talking 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.

[Conditions reordered – 1 March 2012]

Notification and written approvals

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.

12.2.3.5 The suspension of takes

(i) It is a term of any taking of groundwater under Rules 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.

(iA) 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 Non-complying activities: Resource consent required

12.2.5.1 Except as provided for by Rule 12.2.1.1, 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.

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 rules were added to this Plan by the Waitaki Catchment Water Allocation Regional Plan.

12.3 The damming or diversion of water

12.3.1 Prohibited activities: No resource consent will be granted

12.3.1.1 [no change]

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 [no change]

12.3.2 to 12.3.5 *[No change]*

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 were added to this Plan by the Waitaki Catchment Water Allocation Regional Plan.

12.4 to 12.13 *[No change]*

13

Rules: Land Use on Lake or River Beds

13.1 13.4 *[No change]*

13.5 Alteration of the bed of a lake or river

13.5.1 to **13.5.3** *[No change]*

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)).

In relation to Rule 13.5.1.8, Conditions (a) to (d) of the rule address Section 13(1) of the Resource Management Act and Conditions (d) and (e) address Section 13(2)(b) of the Resource Management Act. 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 13.7 *[No change]*

15

Methods other than Rules

15.1 *[No change]*

15.2 Liaison

15.2.1 *[No change]*

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 to 15.2.9 *[No change]*

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 to **15.3.4** *[No change]*

15.4 to **15.7** *[No change]*

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 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:

Supplementary minimum flow = Primary allocation + 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 *[No change]*

15.9 *[No change]*

16
Information Requirements

16.1 to 16.2 *[No change]*

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 to 16.3.13 *[No change]*

16.4 *[No change]*

Schedules

1AA Schedule of Otago Resident Native Freshwater Fish - Threat Status

Common name	Scientific name	Threat Status
Lowland longjaw galaxias	*Galaxias cobitinis*	Nationally Critical*
Canterbury mudfish (Köwaro)	*Neochanna burrowsius*	Nationally Critical
Teviot flathead galaxias	*Galaxias* 'Teviot'	Nationally Critical*
Dusky galaxias	*Galaxias pullus*	Nationally Endangered*
Alpine galaxias	*Galaxias* aff. *paucispondylus* 'Manuherikia'	Nationally Endangered*
Eldon's galaxias	*Galaxias eldoni*	Nationally Endangered*
Central Otago roundhead galaxias	*Galaxias anomalus*	Nationally Vulnerable*
Clutha flathead galaxias	*Galaxias* sp. D.	Nationally Vulnerable*
Smeagol galaxias	*Galaxias* aff. *gollumoiodes* 'Nevis'	Nationally Vulnerable*
Longfin eel (tuna)	*Anguilla dieffenbachii*	Declining
Giant kokopu (Taiwharu)	*Galaxias argenteus*	Declining
Galaxias gollumoides	*Galaxias gollumoides*	Declining
Lamprey (kanakana)	*Geotria australis*	Declining
Torrentfish (Piripiripōhatu)	*Cheimarrichthys fosteri*	Declining
Koaro	*Galaxias brevipinnis*	Declining
Inanga (inaka)	*Galaxias maculatus*	Declining
Bluegill bully	*Gobiomorphus hubbsi*	Declining
Redfin bully	*Gobiomorphus huttoni*	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 2 3 4	Windsor and Dunrobin Water Supplies at J41:325737 Weston and Enfield Water Supplies at J41:381667 Reidston Water Supply at J42:405595 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 8 9	Dunback Water Supply at I43:274279 Palmerston (including Blue Mountain) Water Supply at J43:317237 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 *between Alexandra and Lake Wanaka (including Lake*	13 14	Clyde Water Supply at G42:199521 Cromwell Water Supply at G41:120670

Water body or Catchment	Site No.	Water Supply Values
Dunstan)		
Manuherikia River catchment	15 16	St Bathans Water Supply at H40:592926 and H40:602938 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 *between Alexandra and Island Block*	21	Roxburgh Hydro Village Water Supply at G43:225194
Benger Burn	22	Ettrick 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 29 30 31 32	Dunedin Water Supply at I44:152820 (Ross Creek) I44:153833 (Nicols Creek); I44:160843 (Lower Morrisons Creek) I44:153849 (Upper Morrisons Creek); and I44:164857 (West Branch)
Sullivans Dam	33	Dunedin Water Supply at I44:172863
Rossville Reservoir	34 35	Port Chalmers Water Supply at I44:233865 (Rossville intake); and I44:227879 (Cedar Farm intake)
Waitati River	36 37 38	Dunedin Water Supply at I44:158883 (Burns Creek); I44:160873 (Jeffersons Creek); and I44:159870 (Williams Creek)

Water body or Catchment	Site No.	Water Supply Values
Wetherstons Creek	39	Waitati Water Supply at I44:201882

Taieri/Clutha Plains subregion

Water body or Catchment	Site No.	Water Supply Values
Taieri River *between Outram and Henley*	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 44 45 46	Dunedin Water Supply at I44:096859; I44:105844; I44:105848; and I44:105850
Tokomairiro River East Branch	47	Milton Water Supply at H45:746529
Clutha River/Mata-Au *between Balclutha and the sea*	48 49	Bruce Water Supply at H46:619343 Kaitangata and Wangaloa Water Supplies at H46:667308
Puerua River	50	Richardson Water Supply at H46:510257

Southwest Otago subregion

Water body or Catchment	Site No.	Water Supply Values
Pomahaka River	51 52	Glenkenich Water Supply at G44:103754 Pomahaka and Clinton Water Supplies at G45:342498
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	Clydevale Water Supply at G45:324622
Clutha River/Mata-Au *between Island Block and Balclutha*	57 58	Richardson Water Supply at G45:491435 Balclutha Water Supply at H46:580363
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

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 Maps B1 to B5, 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 the Shag, Kakanui, Welcome Creek, Water of Leith, Taieri, Lake Hayes, Manuherikia, Waitahuna, Waianakarua, Trotters, Luggate and Lake Tuakitoto catchments, as identified in Maps B1 to B5. 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 Maps B1 to B5.

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.

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 Maps B1 to B5, Welcome Creek and aquifers shown in the C-series maps. Maps B1–B5 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 Maps B1-B5	**Monitoring Site (with MS number) See Maps B1–B5**	**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 *Welcome Creek catchment from mouth to headwaters (Also subject to Table 12.1.4.2)*
Kakanui catchment **(a) October to April inclusive**	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 *Kakanui catchment from mouth to headwaters excluding the Waiareka Creek and Island Stream catchments.*
(b) May to September inclusive	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 (October to April) 400 (May to September)	190 *Waianakarua catchment from mouth to headwaters*
Trotters catchment	Mathesons Weir (MS 12)	10 (October to April) 35 (May to September)	15 *Trotters catchment from mouth to headwaters*

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE EXERCISE OF PERMITS TO TAKE SURFACE WATER

Catchment See Maps B1-B5	Monitoring Site (with MS number) See Maps B1–B5	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) Craig Road (MS 2)	28 150	280 *Shag catchment from mouth to headwaters*
Water of Leith catchment	Water of Leith at University Footbridge (MS 4)	94	140 *Water of Leith catchment from mouth to headwaters*
Taieri River upstream of Paerau	Paerau Dam (MS 5a)	850	4860 *Taieri River catchment from mouth to headwaters.*
Taieri River catchment between Paerau and Waipiata	Taieri River at Waipiata (MS 5)	1000	
Taieri River catchment between Waipiata and Tiroiti	Taieri River at Tiroiti (MS 5b)	1100	
Taieri River catchment between Tiroiti and Sutton	Taieri River at Sutton (MS 6)	1250	
Taieri River catchment between Sutton and Outram	Taieri River at Outram (MS 6a)	2500	
Luggate catchment	SH6 Bridge (MS 11)	180 (November to April) 500 (May to October)	500 *Luggate catchment from mouth to headwaters*
Lake Hayes catchment area	Mill Creek at Fish Trap (MS 7)	180	260 *Lake Hayes catchment from lake outlet to headwaters*
Manuherikia River catchment upstream of Ophir	Manuherikia River at Ophir (MS 8)	820	3200 *Manuherikia catchment from mouth to headwaters*
Waitahuna River catchment	Waitahuna River at Tweeds Bridge (MS 9)	450	650 *Waitahuna catchment from mouth to headwaters*
Lake Tuakitoto catchment	Lovells Creek at SH1 (MS 10)	5	30 *Lake Tuakitoto catchment from mouth to headwaters*

2B Schedule of supplementary allocation blocks and specific minimum flows in accordance with Policy 6.4.9(c)

Catchment (See Maps B1–B5) & Supplementary Block Number	Minimum Flow (litres per second – instantaneous flow) at the monitoring site(s) (See Maps B1–B5)	Supplementary Allocation Block (litres per second – instantaneous flow)
Welcome Creek catchment (first supplementary allocation block)	1000 At Steward Road (MS 14)	400 *(Also subject to Table 12.1.4.2)*
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)	October to April: 1050	October to April: 300
	May to September: 1500	May to 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: October to April: 1050 + *(*300 x *number of supplementary allocation block*)* May to September: 1500 + *(*500 x *number of supplementary allocation block*)* * 2 for the 2nd, 3 for the 3rd allocation block, and so on.	All subsequent supplementary allocation blocks in the Kakanui catchment will be based on the following sizes: October to April: 300 May to September: 500
Waianakarua catchment (first supplementary allocation block)	311 At Browns Pump (MS 13)	100
Trotters catchment (first supplementary allocation block)	October to April: 30 at Mathesons Weir (MS 12)	15
	May to September: 50 at Mathesons Weir (MS 12)	15
Trotters catchment (second supplementary allocation block)	October to April: 60 at Mathesons Weir (MS 12)	30
	May to September: 80 at Mathesons Weir (MS 12)	30
Trotters catchment (third supplementary allocation block)	October to April: 90 at Mathesons Weir (MS 12)	30
	May to September: 110 at Mathesons Weir (MS 12)	30

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE EXERCISE OF PERMITS TO TAKE SURFACE WATER

Catchment (See Maps B1–B5) & Supplementary Block Number	Minimum Flow (litres per second – instantaneous flow) at the monitoring site(s) (See Maps B1–B5)	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 (MS2) 501 At Goodwood Pump (MS1)	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	C10	Kakanui catchment*
Shag Alluvium Aquifer	C11	Shag catchment*
Lindis Alluvial Ribbon Aquifer	C1b	Lindis catchment**
Cardrona Alluvial Ribbon Aquifer	C1a	Cardrona catchment upstream of the Mount Barker recorder site**
Lowburn Alluvial Ribbon Aquifer	C3	Lowburn Stream**

* as given in Schedules 2A and 2B.

** as provided for by Policies 6.4.2, 6.4.3 and 6.4.9.

2D *[No change]*

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 Maps C9-C12 and C15. 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	C9 C10	– Human consumption without treatment – Stock drinking water supply and farm dairy water.
Papakaio Aquifer	D1	– Irrigation
North Otago Volcanic Aquifer	C10	– Irrigation
Kakanui-Kauru Alluvium Aquifer	C10	– Human consumption without treatment – Stock drinking water supply and farm dairy water – Irrigation
Shag Alluvium Aquifer	C11	– Human consumption without treatment – Human consumption with treatment – Stock drinking water supply – Irrigation
Ettrick Basin Aquifer	C12	– Human consumption without treatment – Stock drinking water supply and farm dairy water – Irrigation
Roxburgh Basin Aquifer	C12	– Human consumption without treatment – Stock drinking water supply – Irrigation – Industrial
Lower Taieri Aquifer	C15	– Human consumption without treatment – Stock drinking water supply and farm dairy water – Irrigation – Industrial

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 specified restrictions on the exercise of permits to take groundwater

This schedule sets out restrictions that apply to the taking of groundwater from certain aquifers in Otago.

Schedule 4A identifies maximum allocation volumes for the taking of groundwater from aquifers indentified in the C-series maps, in accordance with Policy 6.4.10A(a)(i) of this Plan. Schedule 4B identifies water levels at which the taking of groundwater will be restricted in accordance with Policy 6.4.10A(b) of this Plan. Schedule 4C identifies matters to be considered when making additions to these schedules through a plan change.

4A Maximum allocation volumes for groundwater takes from aquifers

Aquifer Name	Map Reference	Maximum Allocation Volume (million cubic metres per year)
North Otago Volcanic Aquifer	C10	7

4B Restriction levels for groundwater takes

Schedule 4B 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 (m above mean sea level)		
			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	Calder 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 will apply.

4C *[No change]*

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 Hodges[1] 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):

Where 5 l/s ≤ Q ≤ 25 l/s	$r = 65 \times Q$
Where Q > 25 l/s	$r = 1138 \times \log Q$

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 Jenkins[2] 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.

$$\mathbf{Q_s = Q_w erfc(U)}$$

$$\mathbf{U = -(r^2 S/4Tt)}$$

Where:

$\mathbf{Q_s}$	is the rate of stream depletion (cubic length per time)
$\mathbf{Q_w}$	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

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.

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:

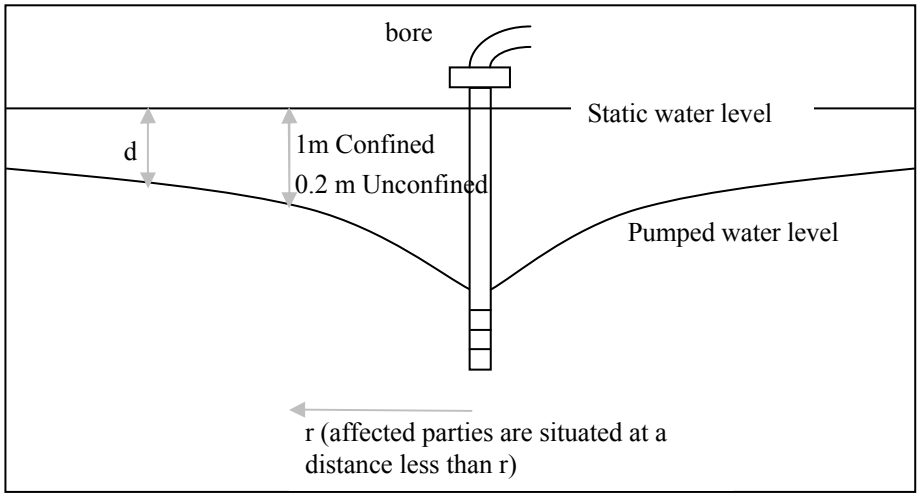
1) That the numerical method is validated or potentially validated at a generic level against either the Theis Equation or the Jenkins Equation; and
2) That the model is in common use for the purpose, and shares a degree of acceptance in such use among groundwater professionals.

[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 ≥ 1 m for confined aquifers or d ≥ 0.2 m for unconfined aquifers, and the 'Theis' equation:

$$\mathbf{d = QW(u)/4\pi T \text{ where } u=r^2S/4Tt}$$

Also where:

d is the interference

Q is the pumping rate from the bore

W(u) is the "well equation", approximated by a Taylor series:

$$-0.5772 - \ln(u) + u - u2/2\cdot2! + u3/3\cdot3! - \ldots$$

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.

11 *[Repealed – 1 March 2012]*

14 *[Repealed – 1 March 2012]*

Glossary

…

Primary allocation	The quantity of water established under Policy 6.4.2

…

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.

…

Use	*[Repealed – 1 March 2012]*

…

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.

Regional Plan: Water

Maps