Proposed Plan Change 1C
(Water Allocation and Use)

Regional Plan: Water for Otago

Otago Regional Council

20 DECEMBER 2008
ISBN 1-877265-756

Introduction

The Otago Regional Council has prepared Proposed Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water for Otago. Proposed Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water for Otago should be read in conjunction with the Regional Plan: Water for Otago. The accompanying Section 32 Report (considering alternatives, benefits and costs) and a Table of Proposed Changes are also available.

Any person may make a submission on Proposed Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water for Otago. You may do so by sending a written submission to the Otago Regional Council. The submission must be in Form 5, as prescribed by Schedule 1 of the Resource Management Act 1991. Copies of this form are available by phoning the Council on 0800 474 082, or can be found on our website www.orc.govt.nz.

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Submissions close at 5pm on 9 March 2009.

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Chapter headings relate to those in the operative Regional Plan: Water for Otago.

Proposed additions to the Regional Plan: Water for Otago are shown as <u>underlined</u> and proposed deletions are shown as ~~struck out~~.

Proposed Plan Change 1B (Water Allocation and Use) may lead to further consequential amendments to the Regional Plan: Water for Otago.

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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 ~~public~~ community water supply, stock drinking water, irrigation, hydro-electric power generation and industrial supply. This chapter ~~deals with~~ addresses resource use conflicts related to the quantity of water in lakes, ~~and~~ 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. ~~Resource c~~Conflicts arise when demand to ~~from activities such as~~ take~~ing~~, dam~~ming~~ or divert~~sion of~~ water affects other resource consent holders, instream natural values, groundwater systems, and recreation and other instream 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). ~~These privileges~~ 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 intended 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 ~~mining privileges~~ deemed permits in respect of water ~~(deemed permits)~~.

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 provisions of this chapter are intended to provide for the maintenance of aquatic ecosystem and natural character values of water bodies. The provisions for the regulation of takes, in terms of minimum flow and allocation limits, are considered to be generally conservative of aquatic life and natural character. 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.

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.

Explanatory note (not part of Plan Change)

Chapter 9's groundwater provisions that are proposed to be incorporated into this chapter unchanged are shown in bold for context purposes.

6.2 Issues

6.2.1 *[Unchanged]*

6.2.1A *[From 9.2.1]* **~~Over-abstraction~~ The taking of ~~ground~~water ~~in~~ 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 compression.**

Explanation

~~Over-abstraction occurs w~~When groundwater is taken for consumptive use from the aquifer ~~at a rate~~ in quantities greater than it is being replaced by aquifer recharge, long term and potentially irreversible adverse effects can occur.

6.2.2 *[Unchanged]*

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

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

Explanation

A range of domestic, agricultural, industrial and commercial uses rely on sufficient quantities of water in Otago. ~~However, wider use of the water is constrained by water shortages. Such~~ The effects of water shortages can be excacerbated by ~~arise for either of two reasons: the natural limits of the water resource or the~~ inefficient or inappropriate ~~water use~~ practices, for example~~. The latter can result in the waste of water, particularly through the following~~:

(a) Water being lost through leakage or evaporation from distribution systems;
(b) Not utilising the most efficient means of taking or using the water; ~~and~~

(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 and constructed bores or excavations into aquifers; and
(h) Securing water in consents which is more than that which is needed for existing activities.

Transporting water from areas where water is scarce, and delivering it to locations where water is plentiful is poor management of the water resource. It could result in local users, who have no choice other than to utilise that source, having inadequate access to water. Potential users might also find less allocation is available as a result of water being secured by existing consents.

6.2.4 *[Unchanged]*

6.2.4A *[From 9.2.2]* **The taking of water from one bore can lower the water level in neighbouring bores.**

6.2.5 to **6.2.8** *[Unchanged]*

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 *[Unchanged]*

6.3.2A *[From 9.3.2]* **To maintain long term ~~aquifer yield~~ groundwater levels and water storage in Otago's ~~groundwater resources~~ aquifers.**

Explanation
The ~~yield~~ levels and pressures of groundwater ~~from~~ 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** *[Unchanged]*

6.4 Policies applying to the management of the taking of water

Index to policies in 6.4

All water takes

Integrated Catchment 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

Lakes and rivers across Otago have highly specific morphology. Their lack of uniformity in size or behaviour 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 connectedness among water bodies increases, there will be opportunities to incorporate local conditions within water management.

6.4.0A *[From 6.4.15 and 9.4.8]* **To ensure that the quantity of water granted ~~under a resource consent for the taking of water~~ to take is no more than that required for the intended purpose of use ~~of that water having regard to the local conditions.~~ taking into account matters including the extent to which:**

(a) Local climate, soil, vegetation and water availability affect the quantity of water requested; and

(b) The proposed water transport system is efficient; and

(c) The application system is efficient.

Explanation

When considering applications for resource consents to take water, the actual quantity required for the intended purpose of use of the water taken must be reflected in any ~~resource~~ consent granted. ~~Given the diverse nature of the Otago region, those requirements may also be affected by conditions within the catchment, and these should also be taken into account in determining the appropriate quantity of water to be granted.~~

Principal reasons for adopting

This policy is adopted to ensure that wastage is avoided when ~~the~~ water is granted ~~allocated~~ to any use ~~take~~ under a ~~new~~ resource consent ~~is no more than the actual requirements of the user~~. This will enable more people to benefit from water available for consumptive use.

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

(a) Allows water users the flexibility to work together, with their own supply arrangements; and

(b) Utilises shared water infrastructure which is fit for its purpose.

Explanation

Individual consent holders may work together, so that they have the flexibility to meet day-to-day requirements from available water. Such arrangements could range from two individuals working together, to all water users within an area. Water users could acquire one or more consents, which would enable this flexibility, by:

(i) Surrendering all individual consents for replacement with fewer consents or a single consent, to take and use water, retaining the existing allocation status; or

(ii) Transferring all or a part of a consent to another person on another site, or to another site, if both sites are in the same catchment or aquifer, permanently or for a limited period, under Section 136(2)(b)(ii) of the Act and Policy 6.4.17; or

(iii) Varying a consent under Section 127 of the Act to allow the movement of the point of water take within an area, and/or inclusion of additional land on which the water may be used.

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

Such consents to take and use water provide:

- Benefits for the water users, including making the best use of available water;

- Economies of scale in managing use, maintaining infrastructure and meeting consent and compliance requirements;
- More opportunity for catchment-based programmes;
- A reduced need for involvement by the Council, especially during periods of low flow; and
- Overall potential for greater economic and community prosperity.

Principal reasons for adopting

This policy is adopted to assist in obtaining optimum benefit from the use of Otago's limited water resources, and to support the development of infrastructure that will achieve this. Through this policy, the Council is able to leave details to groups of water users regarding everyday water taking and use, as their resource consent(s) allow(s).

6.4.0C To prioritise the use of water within the area it is taken from, over its use elsewhere, taking into account matters including:

(a) Competing local demands for that water; and

(b) Whether the take and use of that water is an efficient use of the water resource; and

(c) Whether another possible source of water, including a water supply scheme, is available; and

(d) The economic, social, environmental and cultural costs and benefits that result from the proposed take and use of water.

Explanation

In considering an application to take water, the Council will give regard to competing demands for water. Essential local uses such as domestic, stock drinking, firefighting, and community water supplies under Policy 6.4.8 require adequate water supply. If local demand is satisfied then water may be exported to users elsewhere.

The Council may decline a consent application if it considers taking from another source of water is more efficient allocation of the water resource.

Sections 124A, 124B and 124C of the Act recognise the priority for processing that replacement consents have over new applications. This policy requires all applicants to consider alternatives, including any water supply scheme in the area, so that the most feasible source(s) with available water is utilised.

Principal reasons for adopting

This policy promotes the management of Otago's water resources in a way that enables continued access to suitable water. This will ensure Otago's communities can provide for their social, cultural and economic wellbeing, now and for the future.

Surface Water and Connected Groundwater Takes

6.4.1 To ~~enable~~ manage the taking of surface water, by:

(a) ~~subject to d~~Defined allocation quantities; and

(b) ~~subject to p~~Provision for ~~the retention~~water body levels and ~~of instream flows.~~,

except when the taking is from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha/Mata-Au or Kawarau Rivers.

Explanation

This policy ~~enables~~ provides for the taking of surface water within specified limitations upon the total quantity ~~amount~~ taken ~~from any river~~, ~~and~~ subject to suspension of takes when specified levels and flows for the water body ~~minimum flows~~ are reached.

The details for surface water takes are provided in Policies 6.4.2 – 6.4.11. 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. ~~the following policies, incorporating:~~

- ~~The identification of a limited quantity of water, called the primary allocation, as specified in Policy 6.4.2;~~
- ~~Suspension of the taking of water within primary allocation, when flows fall below minimum flows specified:~~
  - ~~In Schedule 2 for particular catchments in terms of Policy 6.4.3; and~~
  - ~~On a case-by-case basis elsewhere in Otago in terms of Policy 6.4.4;~~
- ~~The application of minimum flows to existing takes in specified Schedule 2A catchments, as set out in Policy 6.4.5 (b) when the Plan becomes operative;~~
- ~~The progressive catchment by catchment application of minimum flows in the Manuherikia and central Taieri and other catchments as set out in Policy 6.4.5 (c) and (d);~~
- ~~Exceptions to the requirements of Schedule 2 where the provisions as specified in Policy 6.4.6 can be met;~~
- ~~A requirement to consider any need for a residual flow at the point of take, in addition to the minimum flow requirements above, through Policy 6.4.7;~~
- ~~An exemption from minimum flow requirements for Schedule 1B community water supply takes under Policy 6.4.8;~~
- ~~Supplementary allocation on a 50:50 flow-sharing basis, or on a case-by-case basis where there are no significant adverse effects, as specified in Policy 6.4.9 (a) and (b); or as specified in Policy 6.4.9 (c) and Schedule 2B for the Kakanui catchment area.~~
- ~~Further supplementary allocation when flows are above the mean flow, in terms of Policy 6.4.10;~~
- ~~The suspension of takes when minimum flows have been reached, in terms of Policy 6.4.11;~~
- ~~The rationing of takes during periods of low flow by local water allocation committees or the Council as specified in Policies 6.4.12 and 6.4.13;~~

- ~~The taking of augmented flows free of minimum flow restrictions in terms of Policy 6.4.14; and~~
- ~~Various provisions regarding reasonable use requirements, the measurement of takes, transfers of permits to take, reallocation of unused primary allocation, the duration of permits, the matching of terms or conditions in catchments affected by deemed permits, and making consents subject to the exercise of other consents.~~

Allocation quantities and minimum flows do not apply to surface water takes from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha/Mata-Au or Kawarau Rivers, where water is plentiful. Because the taking of water creates no currently foreseeable risk to any activity based on these water bodies, there is no need to limit allocation or subject takes to a minimum flow, and these takes are full discretionary activities in terms of this Plan.

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 consumptive users' access to surface water while sustaining aquatic ecological ~~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.

(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 pumping 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 surface water taker.

Surface water minimum flow restrictions are not imposed under (c) because they would not immediately alleviate low surface water flow. Taking is managed in accordance with Policy 6.4.10A.

(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. Taking is managed in accordance with Policy 6.4.10A.

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.

Aquatic ecological communities that are of importance to Otago's biodiversity 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.

6.4.2 *[Unchanged, other than replacement of bullet points with numbers and change in their order]*

6.4.2A In considering any application for a replacement resource consent to take surface water within primary allocation specified in Policy 6.4.2(a)(ii) or (b)(ii), to grant consent only for a rate and volume of water no more than that which has been historically accessed under the previous consent.

Explanation

This policy ensures that only the water physically taken under the previously existing resource consent will be considered for granting when an application to replace that consent is made.

The right to access water given by a consent is not always fully exercised, for example, because:

(i) The consent holder does not need that amount of water, given their intended purpose of use of that water; or

(ii) Water is unable to be physically accessed because the source does not sustain such taking.

If surface water is physically unable to be accessed, then reallocating such amounts within primary allocation is not sustainable management. Where that water is only able to be accessed at high flows, the take is effectively exercised as if it were of supplementary status under Policies 6.4.9 or 6.4.10, and it would be more appropriately granted as supplementary allocation.

Where an application is to take more water than has been physically taken from the source utilised by the previously existing consent, in a catchment to which Policy 6.4.2(a)(ii) or (b)(ii) applies, any new take will come from supplementary or further supplementary allocation, or from an alternative source.

Evidence of the rate and volume of water historically accessed will be required when such replacement consents are sought.

Principal reasons for adopting

This policy is adopted to assist in the reduction of primary allocation under Policy 6.4.2(a)(ii) or (b)(ii), and to ensure any water that is available can be reasonably accessed by other water users as primary allocation or by lowering the supplementary minimum flow set by Policy 6.4.9. This policy also ensures allocation is not constrained by resource consent holders who are not using all or part of their allocated water. It is unfair to potential users of the water resource if primary allocation is tied up in underutilised consents.

6.4.2B In considering any new resource consent to take surface water within primary allocation in terms of Policy 6.4.2(a)(ii) or (b)(ii) for any catchment, to grant consent only when actual allocation is less than the quantities specified in Policy 6.4.2(a)(i) or (b)(i).

Explanation

This policy recognises that the quantity in Policy 6.4.2(a)(ii) or (b)(ii) will decrease with time. No new resource consent for primary allocation shall be issued unless water of that status has become, or is still, available in any catchment. This means water available as primary allocation has:

(i) Fallen below the limit listed in Schedule 2A, in terms of 6.4.2(a)(i); or

(ii) Fallen below or not yet reached 50% of the 7-day mean annual low flow, in terms of 6.4.2(b)(i).

Any further allocation, known as supplementary allocation, must then be considered under Policies 6.4.9 or 6.4.10, or be considered as a full discretionary activity under Rule 12.1.5.1.

Principal reasons for adopting

This policy is adopted to avoid any continuation or increase in the catchment primary allocation, and its effects on lawful users, where allocation exceeds the limits under Policy 6.4.2(a)(i) or (b)(i).

6.4.3 to **6.4.8** *[Unchanged]*

6.4.9 To provide for *supplementary allocation* for the taking of surface 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) ~~The first~~ sSupplementary allocations and associated minimum flows for some catchments ~~the Kakanui River~~ are set in Schedule 2B.

Explanation

Policy 6.4.2 provide~~s~~ for the taking of surface water as primary allocation. This policy provides for the taking of surface water as supplementary allocation ~~for the taking of water~~ 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.

~~Schedule 2B establishes the first supplementary allocations and associated minimum flows for the Kakanui River.~~

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 takes that leave no less than 50% of the flow instream, or are specified in Schedule 2B for the Kakanui River, are a restricted discretionary activity under Rule 12.1.4.3.~~

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~~, or are in addition to the first supplementary allocations specified in Schedule 2B for the Kakanui,~~ will be considered as a full discretionary activity under Rule 12.1.5.1.~~ When setting minimum flows and monitoring arrangements on this basis, the provisions of Policy 5.4.2 as they apply to aquatic ecosystems and natural character will be had regard to.~~

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

Principal reasons for adopting
This policy is adopted to enable access to surface 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 *[Unchanged]*

Groundwater Takes

6.4.10A *[From 9.4.2, 9.4.4, 9.4.5 and 9.4.10]* **To manage the taking of groundwater by:**

(a) Limiting allocation through the identification of a quantity, known as the *maximum allocation volume*, which is:

(i) That specified in Schedule 4A; or

(ii) 50% of the calculated mean annual recharge for those aquifers not specified in Schedule 4A;

except as provided for in Policy 6.4.1A (a) and (b); and

(b) Applying aquifer restriction levels where specified in Schedule 4B, except as provided for in Policy 6.4.1A (a) and (b); and

(c) Avoiding contamination of groundwater or surface water; and

(d) Avoiding permanent aquifer compression.

Explanation

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; and

(ii) Relevant aquifer restriction levels are met; and

(iii) Aquifer contamination or compression 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. Significant drawdown effects are addressed under section (b) of this policy.

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 the 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 Policy 5.4.2 and 5.4.3. Allocating 50% of mean annual recharge ensures the remaining 50% provides for adequate levels of system outflow.

6.4.10B *[From 9.4.7]* **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.**

6.4.10C *[From 9.4.14]* **To require appropriate siting, construction and operation of new groundwater bores, to prevent~~:~~**

~~(a) Contaminants from entering an aquifer;~~

~~(b) The contamination of groundwater in any aquifer from the groundwater in another aquifer;~~

~~(c)~~ ~~T~~the loss of pressure or water wastage in confined artesian conditions~~;~~, 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, or~~ 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. ~~For~~Therefore, new bores~~, the opportunity exists to avoid such adverse effects by requiring:~~ must be adequately sealed to maintain artesian pressure.

- ~~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; and~~
- ~~Adequate sealing so that there is no loss of artesian pressure.~~

The opportunity to upgrade existing bores that allow loss of artesian pressure ~~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 and~~ pressures within an aquifer~~. This is important~~ so that the aquifer can support 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.~~

6.4.10D *[From 9.4.15]* **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.**

6.4.10E *[From 9.4.16]* **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.**

All Water Takes

6.4.11 *[Also from 9.4.6]* **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 Otago Regional Council's "Water Info" telephone service. Where no access to low flow information is available directly by that telephone service, then the Otago Regional 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, the relevant resource consents for the taking of groundwater will be suspended 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 Otago Regional Council will notify those taking groundwater under resource 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 Otago Regional Council may, by public notice, also suspend the taking of water under permitted activity Rules 12.1.2.4, and 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 is adopted to indicate when resource consents for also ensures the taking of groundwater will be suspended in order to protect the aquifers yield and their recognised uses of the aquifer.

6.4.12 *[Also from 9.4.12]* **To promote, establish and support appropriate water allocation committees to assist in the management of water rationing and ~~flow~~ monitoring during periods of water shortage.**

Explanation
Water allocation committees can assist the ~~Otago Regional~~ Council to manage the region's water resources when ~~flows~~ 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 ~~minimum flow~~ rationing regime. The ~~Otago Regional~~ 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 ~~Otago Regional~~ 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, appoint 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; or

(b) Rationing the take and use of water to comply with relevant regulatory requirements; or

(c) Recording and reporting information to the Council on the exercise of resource consents as required by consent conditions and other regulatory requirements; or

(d) Reporting information to the Council for enforcement of regulatory requirements.

Explanation
Water management groups provide flexibility for two or more consent holders to cooperate in exercising their consents, but without the formality of becoming a water allocation committee. Appendix 2A sets out the criteria for a group to be appointed by the Council as a water management group, and the functions they may undertake.

Where the group chooses to ration taking and use, or report information for enforcement, the Council may delegate to them powers under the Act so that they can exercise these functions effectively.

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.

6.4.13 *[Also from 9.4.13]* **To suspend the taking of water as required to comply with any Council recognised rationing regime ~~established, by a water allocation committee established in terms of Policy 6.4.12, or by the Council in the absence of such a water groups or committees allocation committee~~.**

Explanation

This policy ~~is adopted to~~ provides for the suspension of takes in accordance with the requirements of any Council recognised rationing regime ~~established by any water allocation committee or the Council, where a water allocation committee is not the preferred option of the water users. The Council will review and approve the rationing regimes of the allocation committees. Consent conditions will support the rationing regime established by the allocation committee or the Council~~. A rationing regime will include:

- The area or consent holders covered by the regime;
- The flow at which the regime will commence; and
- A description of how the regime will be applied.

The requirement for compliance with any ~~approved~~ recognised rationing regime ~~established by a water allocation committee or the Council~~, will be a condition of resource consents that can be included on new consents, or upon the review of existing consents.

Principal reasons for adopting

This policy is adopted to enable the ~~equitable~~ fair sharing of water ~~resources~~ under low flow conditions, and to assist ~~to~~ in delaying the wider suspension of takes ~~by a minimum flow restriction~~.

6.4.14 *[Unchanged]*

6.4.15 *[Refer to 6.4.0A]*

6.4.16 *[Also from 9.4.22]* **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), ~~and~~ 12.1.4.7 (vi), 12.2.3.1 and 12.2.3.2, 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 *[Also from 9.4.11]* **On the application of any resource consent holder, to approve the transfer of consents to take or use water in terms of Section 136(2)(b)(ii) of the Resource Management Act, retaining the take's allocation status, providing:**

(a) The transferred take is exercised within the same catchment or aquifer as the original resource consent; 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 intended 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 a resource consent, or part of a consent, to another site or to another person on 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 must be made to the ~~Otago Regional~~ Council. This policy sets out the requirements for the transfer of consents to take water to be approved by the Council. The explanation to Policy 6.4.~~16~~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 *[Unchanged]*

6.4.19 *[delete]* ~~**The term of any permit that is granted subject to a minimum flow applied under Policies 6.4.3, 6.4.9(a) or 6.4.10 may be up to 35 years.**~~

~~**Explanation**~~
~~Permits subject to a minimum flow applied under Policies 6.4.3, 6.4.9(a) or 6.4.10 may be granted for a term of up to 35 years, if that is the term applied for.~~, ~~because these minimum flows provide for aquatic ecosystems, natural character and other water users.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to enable long-term security of access to water resources where instream needs have been assessed and provided for in terms of this Plan. The use of longer terms will assist with minimising the costs of implementing the Plan.~~

~~*Rules: 12.1.3.1 to 12.1.5.1*~~

6.4.20 *[delete]* ~~**In catchments where water permits are affected by the exercise of mining privileges, any water permits granted by the Council will be:**~~
~~**(a) For a term expiring on or before 1 October 2021; or**~~
~~**(b) For a longer term, subject to a condition enabling the Council to review the conditions of the water permit to restrict the exercise of that permit to allow the exercise of another water permit.**~~

~~**Explanation**~~
~~Mining privileges confer priorities to water. These historic priorities expire on 1 October 2021. Holders of mining privileges who wish to continue their activities after that date will need to apply for new water permits. At that time it will be appropriate for the Council to evaluate the inter-relationship of all activities affecting water (whether under a mining privilege or water permit) in the~~

~~catchment to determine whether any water permit should be subordinate to any other water permit~~.

~~This policy creates no presumption that new priorities will or will not be afforded to any replacement consents.~~

~~So that this evaluation can be carried out, water permits will be granted for a term or on conditions that allow the Council to take account of activities authorised by water permits, as well as activities permitted by expiring mining privileges.~~

~~Where mining privileges do not affect other water permits then this policy will not be applied.~~

~~Principal reasons for adopting~~

~~The policy is adopted to enable the Council to simultaneously assess the relationship between takes and other uses involving water in catchments affected by the exercise of mining privileges and, where necessary and appropriate, restrict the taking or other activity affecting water under one permit in favour of another water permit.~~

~~*Rules 12.1.4.1 to 12.1.5.1*~~

6.4.21 *[delete]* **~~In granting water permits, the Council may restrict the exercise of a water permit to allow the exercise of another water permit.~~**

~~Explanation~~

~~In some circumstances the exercise of a water permit may need to be subject to, or subservient to, the exercise of another water permit.~~

~~For example, such consideration may be required to ensure that a water body is not adversely affected by the simultaneous exercise of multiple takes or the exercise of one take is not adversely affected by the exercise of the other take or takes. This can occur when the instantaneous take volumes are larger than the water available to be taken and there are takes that can conflict with each other. Similar considerations may be needed on a river where there are dams that may affect or be affected by takes or other dams.~~

~~The Council may consider making one permit subordinate to another permit when it deals with an application for a consent for a water permit currently authorised by a mining privilege. In such cases, no assurance can be given that a replacement permit will be granted, nor that a new permit will continue any existing priorities.~~

~~Where an application is made for a permit to replace an expiring mining privilege, the Council will consider, but not exclusively:~~

1. ~~Whether the take previously held priority or was subject to a priority.~~
2. ~~When the mining privilege is exercised.~~
3. ~~The extent to which the mining privilege is exercised.~~
4. ~~How often the exercise, or potential exercise, of any water permit or lower priority mining privilege is, or could be, affected by the priority attached to a mining privilege.~~

~~5. Whether the amount of water authorised to be taken under the mining privilege is more than needed for the actual use.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to indicate that the Council may make water permits subject to or subservient to other water permits where appropriate and necessary whether mining privileges are involved or not.~~

~~*Rules 12.1.4.1 to 12.1.5.1*~~

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 and multi-property irrigation supplies.

There are also opportunities to rationalise water supply, to store and 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** [*Unchanged]*

6.7 Anticipated environmental results

6.7.1 *[Unchanged]*

6.7.2 *[Also from 9.5.1]* **People and communities have access to suitable supplies of water for their present and reasonably foreseeable needs.**

6.7.3 to **6.7.7** *[Unchanged]*

6.7.8 *[Also from 9.5.3]* **Conflict among those taking water is minimised.**

NOTE: This chapter of Proposed Plan Change 1C shows amended provisions, deleted provisions, and those provisions that are moved into Chapter 6

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 ~~provides for the allocation of groundwater within the sustainable yield (Policy 6.5.11) and~~ 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 *[Refer to 6.2.1A]* ~~**Over-abstraction of groundwater in Otago can lead to:**~~

~~**(a) Long term depletion of groundwater volume;**~~
~~**(b) Loss of artesian conditions;**~~
~~**(c) Short and long term depletion of surface water;**~~
~~**(d) Contamination of groundwater resources; and**~~
~~**(e) Aquifer compression.**~~

~~**Explanation**~~

~~Over-abstraction occurs when groundwater is taken for consumptive use from the aquifer at a rate greater than it is being replaced by aquifer recharge. Such over-abstraction can result in the following adverse effects:~~

~~(a) Reduction of groundwater volumes: Given the reliance of particular communities on groundwater resources, any long term reduction in the amount of water able to be taken is of concern.~~

~~(b) Loss of artesian conditions: The loss of artesian pressure in aquifers also reduces the ability of users to access water. Existing bores would require the installation of pumps to maintain the ability to draw water and this may not always be achievable.~~

(c) Depletion of surface water: Where aquifers have a strong connection with rivers, excessive takes of groundwater can reduce the river flows. This is of concern as such reductions can adversely affect the natural and human use values supported by the river and the ability of people to take water for consumptive use.

(d) Contamination of groundwater: Over-abstraction of groundwater can induce intrusion of poorer quality groundwater or sea water to the aquifer. This is of concern given that after contamination, restoration of groundwater to its original quality can be difficult and, where it is possible, may take a long time.

(e) Aquifer compression: Irreversible aquifer compression, or reduction in the aquifer's capacity to hold water, may occur as a result of over-abstraction. In such circumstances it is very difficult to restore the original aquifer capacity. Land subsidence may also occur as a consequence of aquifer compression.

Table 1 summarises concerns relating to over-abstraction of groundwater from particular aquifers that have been investigated to date. Investigation of further aquifers is ongoing.

Table 1: Issues related to over-abstraction in significant Otago aquifers.

Aquifer	Depletion of groundwater volume	Loss of artesian pressure	Depletion of surface water	Contamination of groundwater
Papakaio	✓	✓	✓	✓
North Otago Volcanics	✓		✓	✓ (sea water)
Kakanui-Kauru Alluvium			✓ (short term)	
Lower Shag Alluvium			✓ (short term)	✓ (sea water)
Lower Taieri	✓	✓	✓	✓
Ettrick Basin	✓		✓	
Roxburgh Basin	✓			

Objectives: 9.3.1, 9.3.2, 9.3.3
Policies: 9.4.1 to 9.4.6, 9.4.8 to 9.4.13, 9.4.15, 9.4.16, 9.4.22
See also: Policies in section 6.4

9.2.2 *[Refer to 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.

Objectives: 9.3.4
Policies: 9.4.7, 9.4.8, 9.4.12, 9.4.13, 9.4.22

9.2.3 to **9.2.5** *[Unchanged]*

9.3 Objectives

9.3.1 *[Unchanged]*

9.3.2 *[Refer to 6.3.2A]* ~~**To maintain long term aquifer yield in Otago's groundwater resources.**~~

~~**Explanation**~~
~~The yield of groundwater from 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.~~

~~**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.~~

~~*Policies: 9.4.1 to 9.4.6, 9.4.8, 9.4.9, 9.4.11 to 9.4.13, 9.4.15, 9.4.16, 9.4.22*~~

9.3.3 *[Unchanged]*

9.3.4 *[Refer to 6.3.3]* ~~**To minimise conflict among existing users of groundwater bores.**~~

~~**Explanation**~~
~~The taking of water through one bore can reduce the amount of water available at other nearby bores through reductions in pressure or water levels. This creates the potential for conflict among users of groundwater bores. This objective seeks to avoid such conflict by minimising the potential for bore interference.~~

~~**Principal reasons for adopting**~~
~~This objective is adopted in recognition of the investment that Otago's communities have made in resources to take and use groundwater. By minimising the potential for bore interference, continued access to the resource will be enabled.~~

~~*Policies: 9.4.7, 9.4.8, 9.4.11, 9.4.12, 9.4.13, 9.4.22*~~

9.3.5 *[Unchanged]*

9.4 Policies

9.4.1 *[Unchanged]*

9.4.2 *[Also refer to 6.4.10A]* **In managing the taking of water from any groundwater aquifer, to give priority to avoiding, in preference to remedying or mitigating:**

~~(a) The total take from all bores exceeding the annual renewable yield of the aquifer;~~

~~(b) Depletion of any surface water resource;~~

~~(c) Contamination of groundwater of surface water;~~

~~(d) Aquifer compression; or~~

~~(e) I~~irreversible or long term degradation of soils arising from use of the water for irrigation.

Explanation

The ~~taking of groundwater can have adverse effects on both groundwater and surface water resources, while 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 ~~in (a) to (e) of the policy~~. If the adverse effects of the taking are considered to be unavoidable, the adverse effects must be remedied or mitigated.

Principal reasons for adopting

~~This policy is adopted to ensure that the quality and quantity of groundwater, and any connected surface water, is maintained when managing the taking of water from any aquifer. It is important to achieve this outcome, in order to provide for the needs of Otago's present and future generations.~~ The policy will ~~also~~ assist to maintain soil quality where it may be adversely affected by the application of groundwater.

9.4.3 *[Refer to 6.4.0]* **~~In managing the effects of any take of groundwater on surface water resources, to have regard to:~~**

~~(a) The connection between the water bodies;~~

~~(b) The transmissivity within the aquifer.~~

~~Explanation~~

~~Policy 9.4.2 gives priority to avoiding the depletion of any surface water resource caused by the taking of groundwater. The way in which takes of groundwater affect surface water resources is influenced by the degree to which an aquifer allows water to pass through it (its transmissivity) and the degree to which it is connected to surface water. These factors will need to be evaluated when considering resource consents for the taking of groundwater, to determine the likely effect the take may have on surface water.~~

~~Principal reasons for adopting~~

~~This policy is adopted to recognise that changes in groundwater quantity within an aquifer can impact upon surface water bodies. This recognition will assist to~~

~~manage takes of groundwater so that the adverse effects on surface water body quantity are avoided, remedied or mitigated in accordance with Policy 9.4.2.~~

~~*Rules: 12.2.3.1 to 12.2.4.1*~~

9.4.4 *[Refer to 6.4.10A]* **~~To establish and set restriction levels, as identified in Schedule 4, applying to resource consents for the taking of groundwater from the following aquifers:~~**
~~(a) Papakaio;~~
~~(b) North Otago Volcanics;~~
~~(c) Lower Taieri;~~
~~(d) Ettrick Basin; and~~
~~(e) Roxburgh Basin.~~

~~Explanation~~
~~The exercise of resource consents to take water from the above aquifers will be restricted, in the form of a percentage reduction in allowable take, when the aquifer levels specified in Schedule 4 have been reached. A non-regulatory alternative to the 25% restriction can be utilised by a water allocation committee appointed by the Council, provided the committee uses a protocol approved by the Council. Policy 9.4.5 identifies when the restrictions will apply to resource consents. Maps D1-D4 show the areas over which the restrictions apply.~~

~~Principal reasons for adopting~~
~~This policy is adopted to maintain levels and pressures within specified distances of aquifer maxima in the identified aquifers. This will assist in achieving the environmental results detailed in Schedule 4.~~

~~*Rules: 12.2.3.2 to 12.2.4.1*~~

9.4.5 *[Refer to 6.4.10A]* **~~The restriction levels established by Policy 9.4.4 will apply to resource consents for the taking of groundwater, 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 existing resource consent to take groundwater which contravenes Rule 12.2.3.2, and was either:~~
~~(i) Current at 28 February 1998; or~~
~~(ii) Granted after 28 February 1998 but was applied for prior to 28 February 1998,~~
~~upon collective review of consents within each aquifer under Section 128 of the Resource Management Act, to occur at a date in the period from 2 October 2001 to 2 October 2021, as determined in consultation with affected consent holders.~~

~~Explanation~~
~~This policy provides for the progressive application of the restriction levels established by Policy 9.4.4 to which resource consents for the taking of groundwater will be subject. Such restriction of any new take will apply immediately, through conditions on the consent. Restrictions will apply to takes of groundwater existing at 28 February 1998 through review under Sections 128 to~~

~~132 of the Resource Management Act. A condition on the resource consent may then require the consent to be suspended when the restriction level has been reached. This review will be coordinated so that the resource consents can be considered collectively.~~

~~Principal reasons for adopting~~

~~This policy is adopted to establish how restriction levels will be applied to resource consents for taking water. The policy ensures the effective, and equitable implementation of means to protect the recognised uses of aquifers. The requirement that takes existing at 28 February 1998 become subject to restrictions from 2 October 2001 is to coordinate the review of ordinary resource consents with the termination of Notified Use rights issued pursuant to the Water and Soil Conservation Act 1967.~~

~~Rules: 12.2.3.2 to 12.2.3.5~~

9.4.6 *[Refer to 6.4.11]* **~~To suspend the exercise of resource consents to take groundwater when the relevant restriction levels identified in Schedule 4 have been reached.~~**

~~Explanation~~

~~When the restriction levels identified in Schedule 4 have been reached, the relevant resource consents for the taking of groundwater will be suspended. The levels are monitored from monitoring bores, identified in Maps D1-D4. The Otago Regional Council will notify those taking groundwater under resource 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 4.~~

~~Principal reasons for adopting~~

~~This policy is adopted to indicate when resource consents for the taking of groundwater will be suspended in order to protect the aquifer yield and the recognised uses of the aquifer.~~

~~Rules: 12.2.3.2 to 12.2.3.5~~

9.4.7 *[Refer to 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.~~

~~*Rules: 12.2.3.1 to 12.2.4.1*~~

9.4.8 *[Refer to 6.4.0A]* **~~To ensure that the quantity of water granted, under a resource consent for the taking of water, is no more than that required for the intended use of that water having regard to the local conditions.~~**

~~Explanation~~

~~When considering applications for resource consents to take water, the actual quantity required for the intended use of the water taken, must be reflected in any consent granted. Given the diverse nature of the Otago region, those requirements may also be affected by local conditions, and these should also be taken into account in determining the appropriate quantity of water to be granted.~~

~~Principal reasons for adopting~~

~~This policy is adopted to ensure that the water allocated to any take under a new resource consent is no more than the actual requirements of the user. Reducing such inefficient use of water will enable more people to benefit from water available for consumptive use.~~

~~*Rules: 12.2.3.1 to 12.2.4.1*~~
~~*Other methods: 15.3.1.1*~~

9.4.9 *[Refer to 6.4.1A]* **~~To manage the taking of water from the Kakanui-Kauru Alluvium and Shag Alluvium Aquifers in accordance with minimum flow regimes, identified in Schedules 2A and 2B for the Kakanui catchment area and policies under 6.4 for the Shag catchment area.~~**

~~Explanation~~

~~Because of the close interconnection of alluvial groundwater and surface water in the Kakanui and Shag catchments, groundwater takes may affect surface water, and vice-versa. Therefore, these surface and groundwater takes will be managed for the same objective. This means that takes of water from the Kakanui-Kauru Alluvium and Shag Alluvium Aquifers will cease when the minimum flows established in this Plan for the Kakanui and Shag Rivers have been reached, in accordance with Policy 6.4.11. Maps C10 and C11 show the Kakanui-Kauru Alluvium and Shag Alluvium Aquifers.~~

~~Principal reasons for adopting~~

~~This policy is adopted to ensure the management of groundwater and surface water is consistent, where the two resources are closely connected within both the Kakanui-Kauru and Shag catchments. Restrictions on surface water takes to maintain a minimum flow in these rivers, will not be effective if takes from a closely connected groundwater body are not similarly limited.~~

Rules: 12.2.3.1, 12.2.3.5, 12.2.4.1
See also: Policies in section 6.4 and Schedule 2A and 2B

9.4.10 *[Refer to 6.4.10A]* **To manage the taking of water from any bore such that groundwater contamination by sea water intrusion is avoided.**

Explanation
Sea water occurs at the coast, but it can also extend inland within a fresh water body. Where pumping from a bore reduces the water level in an aquifer so that this sea water enters the aquifer, contamination occurs. This policy requires minimum pumping water levels to be set when considering applications to take groundwater from vulnerable aquifers near the coast or near the inland extent of sea water. A minimum pumping level is the level of water in the aquifer below which the taking of water should cease.

Principal reasons for adopting
This policy is adopted to prevent sea water intrusion into aquifers near the coast. Maintaining the elevation of the pumping water level for any bore within close proximity of sea water will prevent sea water intrusion caused by the pumping. If contaminated, the resulting salt content of the groundwater would restrict its range of uses.

Rules: 12.2.3.1 to 12.2.4.1

9.4.11 *[Refer to 6.4.17]* **On the application of any consent holder, to approve the transfer of consents to take water in terms of Section 136(2)(b)(ii) of the Resource Management Act providing that:**

(a) The transferred take is exercised within the same aquifer as the original consent;

(b) The total take from the aquifer following transfer does not exceed that occurring prior to the transfer, as a result of the transfer;

(c) The quantity of water taken is no more than that required for the intended use of that water, having regard to the local conditions; and

(d) There is no more than a minor adverse effect on any other take.

Explanation
Section 136(2)(b) of the Resource Management Act provides for the transfer of a resource consent, or part of a consent, to another site or to another person on another site, if both sites involve the same aquifer. An application to transfer the consent must be made to the Otago Regional Council. This policy sets out the requirements for the transfer of consents to take water to be approved by the Council. The explanation to Policy 9.4.8 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 other water users' interests in the water resource, are not

adversely affected. Transfers are a means by which the beneficial and efficient use of the allocated resource can be achieved.

Rules: 12.2.3.1 to 12.2.4.1

9.4.12 *[Refer to 6.4.12]* **To promote, establish and support appropriate water allocation committees to assist in the management of the taking or using of groundwater.**

Explanation

Water allocation committees can assist the Otago Regional Council to manage Otago's groundwater resources. In particular, where levels approach those identified in Schedule 4 for the restriction of groundwater takes, such groups can:

(a) Effectively manage water rationing to avoid or delay reaching the restriction levels;

(b) Manage the implementation of the take restrictions in accordance with Schedule 4.

The committees will be made up of local representatives of people taking water from within the catchment affected by the restriction regime. The Otago Regional Council will appoint such committees, as subcommittees of the Council, for the purpose of developing and managing rationing regimes. The Council will support them by providing information on water levels, and advice on options for rationing to suit particular circumstances, and by enforcing compliance with rationing regimes, as provided for by Policy 9.4.13. The rationing regimes require approval of the Otago Regional Council.

Principal reasons for adopting

This policy is adopted to ensure effective water allocation 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 will facilitate appropriate management of the taking and use of groundwater and enable users to get involved in that management.

Other methods: 15.2.2.1, 15.3.2.1

9.4.13 *[Refer to 6.4.13]* **To suspend any resource consent to take groundwater where the holder of that resource consent does not comply with any rationing regime established by a water allocation committee established in terms of Policy 9.4.12.**

Explanation

Where takes may be restricted by the application of a restriction level or minimum flow, there can be benefit to users in adopting a cooperative approach to rationing takes of groundwater. As the observed flow approaches the restriction level, consent holders may act to ration their combined take and keep the level above those identified in Schedule 4. This can only work effectively when all consent holders cooperate in observing rationing arrangements. Where consent holders do

~~not cooperate, their consent may be suspended by the Otago Regional Council in advance of others.~~

~~The requirement for compliance with any rationing regime established by a water allocation committee will be a condition of resource consents that can be included on new consents, or upon the review of existing consents.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to enable the equitable sharing of water resources under conditions of low groundwater availability, and assist to delay the wider suspension of takes by a restriction level.~~

~~*Rules: 12.2.3.1 to 12.2.4.1*~~
~~*Other methods: 15.2.2.1*~~

9.4.14 *[Also refer to 6.4.10C]* **To require appropriate siting, construction and operation of new groundwater bores, to prevent:**

(a) Contaminants from entering an aquifer; <u>and</u>

(b) The contamination of groundwater in any aquifer from the groundwater in another aquifer; <u>and</u>

~~(c) The loss of pressure or water wastage in confined artesian conditions; 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~~, or 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~~. 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<u>.</u>~~; and~~
- ~~Adequate sealing so that there is no loss of artesian pressure.~~

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 ~~and pressures~~ 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.

Rules: 12.2.3.1 to 12.2.5~~4~~.1, 14.1.1.1
Other methods: 15.4.2.2

9.4.15 *[Refer to 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 D1 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.~~

~~*Rules: 14.1.1.1*~~
~~*Other methods: 15.4.2.2*~~

9.4.16 *[Refer to 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 D1 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.~~

~~*Rules: 14.1.1.1*~~
~~*Other methods: 15.4.2.2*~~

9.4.17 to **9.4.21** *[Unchanged]*

9.4.22 *[Also refer to 6.4.16]* **In granting resource consents to take water from any aquifer, or in any review of the conditions of a resource consent to take water from any aquifer,** ~~**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, and~~ where appropriate to require groundwater quality to be monitored.

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 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 review of consent conditions undertaken in accordance with Policy 9.4.5 and Rules 12.2.3.1(vii) and 12.2.3.2(v).~~

It may ~~also~~ be appropriate to require that the quality of groundwater taken from bores be monitored to provide data to determine changes in water quality in the aquifer. These changes may signal the need for management of water takes from the aquifer or land use over parts of aquifers which are vulnerable to leachate contamination.

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 allow adjustment of the allocation of water available to users.~~

~~The reasons for requiring the measuring of takes as a result of a review of consent conditions, under Policy 9.4.5 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 or aquifer restriction levels 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 aquifer levels to prevent aquifer restrictions from being breached.~~

This policy is ~~also~~ adopted to provide better information on the quality of the groundwater where that is necessary and appropriate.

Rules: 12.2.3.1 to 12.2.5~~4~~.1

9.4.23 *[Unchanged]*

9.5 Anticipated environmental results

9.5.1 *[Refer to 6.7.2]* ~~**Aquifer yield is maintained so that Otago's people and communities have access to suitable supplies of groundwater for their present and reasonably foreseeable needs.**~~

9.5.2 *[Unchanged]*

9.5.3 *[Refer to 6.7.8]* ~~**Bore interference is minimised.**~~

9.5.4 *[Unchanged]*

12

Rules: Water Take, Use and Management

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

12.1.2.1 The taking ~~or~~ and use of surface water for an individual's reasonable domestic needs or the reasonable needs of an individual's animals for drinking water is a ***permitted*** activity providing that taking or use does not, or is not likely to, 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 and Kawarau Rivers, or ~~from~~ Lakes Wanaka, Hawea, Wakatipu, Dunstan and 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 *[Unchanged]*

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 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 means and timing of the take, and the rate of take; and
(d) The quantity of water required to meet the needs of the community; 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, ~~T~~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 provided for by:*~~
~~*1. Section 14(3)(b) and (e) of the Act; or*~~
~~*2. Permitted and controlled activity rules in 12.1.2 and 12.1.3 above.*~~
For taking water from Lakes Dunstan, Hawea, Roxburgh, Wanaka, Wakatipu,

or the main stem of the Clutha/Mata-Au and Kawarau Rivers:
Any take which does not meet the permitted activity standards set in Rule 12.1.2.2 is considered as discretionary under Rule 12.1.5.1, as it is exempt from primary allocation and minimum flow restrictions, 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),
Shag (Map B3),
Kakanui (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. 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 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.

12.1.4.3 Taking and use of surface water as ~~primary allocation or the first~~ supplementary allocation~~s~~ specified in Schedule 2B~~, in the Kakanui catchment area (Map B3)~~:

(i) This rule applies to the taking of surface water ~~in the Kakanui catchment area,~~
~~(a) As primary allocation as specified in Schedule 2A, subject to the minimum flows specified in Schedule 2A; and~~
~~(b) The taking of 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.

(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:
Manuherikia Catchment Upstream of Ophir (Maps B2 and B4),
Taieri Catchment Paerau to Waipiata (Maps B2 and B4), and
Taieri Catchment Waipiata 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 Manuherikia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata and Waipiata 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 Manuherikia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata and Waipiata 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 Taking and use of surface water from Welcome Creek ~~applied for prior to 19 February 2005~~:

~~(i) This rule applies to the taking of surface water, if the taking was subject of a resource consent or other authority:~~
~~(a) Granted before 19 February 2005; or~~
~~(b) Granted after 19 February 2005, but applied for prior to 19 February 2005; or~~
~~(c) Granted to replace a resource consent or authority of the kind referred to in paragraph (a) or (b).~~

(iA) This rule applies to the taking of surface water, as primary allocation 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:
(a) 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 the following Table 12.1.4.4A.~~; and~~
~~(b) It complies with the minimum flow set in (iii).~~

The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.

~~(iii) Takes to which this rule applies will be subject to a minimum flow equivalent to the 5-year 7-day low flow until the minimum flow has been determined by investigation and added to Schedule 2A by a plan change.~~

Table 12.1.4.4A: 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 12.1.4.4A.

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 ~~and not in Welcome Creek~~:

(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 12.1.4.4A. 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 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 ~~and not in Welcome Creek~~:

(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 12.1.4.4A. 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 will then apply.

12.1.4.7 Taking and use of surface water as supplementary allocation in any catchment other than ~~the Kakanui catchment area and Welcome Creek~~ a Schedule 2B catchment:

(i) This rule applies to the taking of surface water as supplementary allocation for any catchment area, except ~~the Kakanui~~ 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 ~~the Kakanui~~ 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 12.1.4.4A 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 surface water in terms of Rules 12.1.4.2 to 12.1.4.7, the Otago Regional Council will restrict the exercise of its discretion to the following:

~~(a)~~(i) The amount of water to be taken and used; and

~~(m)~~(ii) The means and timing of the take, and the rate of take; and

~~(n)~~(iii) The quantity of water required for the intended purpose of use; and

(iv) In the case of a replacement primary allocation consent, the rate and volume of water historically accessed under the previous consent; and

(v) The proposed method(s) of delivery and application of the water taken (including efficiency); and

(vi) The source(s) of water available to be taken; and

(vii) The location(s) of the use of the water, when it will be taken out of a local catchment; and

(viii) Competing lawful local demand for that water; and

~~(b)~~(ix) The primary and supplementary allocation limits for the catchment; and

~~(c)~~(x) Whether the proposed take ~~comes as~~ is primary or supplementary allocation for the catchment; and

(xi) Any arrangement for cooperation with other takers, with the ability to respond flexibly to local circumstances, that has been entered into; and

(xii) Any water storage facility available for the water taken, and its capacity; and

~~(d)~~(xiii) The minimum flow to be applied to the take of water, if consent is granted; and

~~(e)~~(xiv) Where the minimum flow is to be measured, if consent is granted; and

~~(f)~~(xv) Any adverse effect on any lawful take of water, if consent is granted, including potential bore interference; and

(xvi) Any actual or potential effects on any groundwater body; and

(xvii) The consent being exercised or suspended in accordance with any Council recognised rationing regime in that catchment or, in its absence, the Council; and

~~(g) Any adverse effect on any lawful priority attached to any resource consent or deemed permit; and~~

~~(h) Whether the taking of water under a water permit should be restricted to allow the taking or damming of water under any other permit, and~~

~~(i)~~(xviii) Any need for a residual flow at the point of take; and

~~(j)~~(xix) Any need to prevent fish entering the intake; and

~~(k)~~(xx) Any adverse effect on a significant wetland value identified in Schedule 9 or any wetland higher than 800 metres above sea level; and

~~(l)~~(xxi) Any financial contribution for Type B wetland values that are adversely affected; and

~~(o)~~(xxii) The duration of the resource consent; and

~~(p)~~(xxiii) The information, ~~and~~ monitoring and metering requirements; and

~~(q)~~(xxiv) Any bond; and

~~(r)~~(xxv) The review of conditions of the resource consent; and

~~(s)~~(xxvi) For resource consents in the Waitaki catchment the matters in ~~(a) to (r)~~(i) to (xxv) above, as well as matters in Policies 6.6A.1 to 6.6A.6.

Notification and written approvals

(a)~~(i)~~ 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:

~~(a)~~(i) A river for which a minimum flow has been set by or under this Plan; or

~~(b)~~(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)~~(ii)~~ 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 takinges to enable the minimum flow to be met ~~that are subject to that minimum flow shall cease~~.

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 in Rule 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 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 12.1.4.4A; and

(ii) The take does not comply with the minimum flow set out in Rule 12.1.4.4A(iii).

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.

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 ~~takes~~ 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.

Because the Manuherikia and the Taieri catchments are substantially over-allocated, no provision has been made to allocate more water as primary allocation under Rule 12.1.4.4 in the specified areas of these catchments. The primary allocations in accordance with Policy 6.4.2(a)(i) (shown in Schedule 2A) and current primary allocations in accordance with Policy 6.4.2(a)(ii) are:

Catchment (from mouth to headwaters)	Primary Allocation as per Schedule 2A	Estimated primary allocation as at 28 February 1998
Manuherikia	3,200 litres/sec	27,700 litres/sec
Taieri	4,860 litres/sec	14,400 litres/sec

It is considered that no further primary allocation will be available in ~~either of these~~ over-allocated catchments ~~within the life of this Plan~~ except in terms of Policy 6.4.2B.

12.2 The taking and use of groundwater

Note: The construction or alteration of any bore for taking groundwater, including groundwater considered surface water, 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

12.2.2.1 The taking ~~or~~ and use of groundwater for an individual's reasonable domestic needs or the reasonable needs of an individual's animals for drinking water is a ***permitted*** activity providing that taking or use does not, or is not likely to, 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) The take is for a rate no greater than 1.5 l/s, and a volume no greater than 10,000 litres per day, at any landholding, from the following aquifers:

~~(i) Kakanui-Kauru Alluvium (as identified on Map C10);~~

~~(ii) Shag Alluvium (as identified on Map C11);~~

(iii) Roxburgh Basin (as identified on Map C12);

(iv) Manuherikia Claybound (as identified on Map C4);

(v) Dunstan Flats Groundwater Zone B (as identified on Map C4);

(vi) Manuherikia Alluvium (as identified on Map C4); and

(vii) Wakatipu Basin (as identified on Map C2); and

(c) The take is for a rate no greater than 2.5 l/s, and a volume no greater than 30,000 litres per day, at any landholding, from the following aquifers:

(i) Lower Waitaki Plains Groundwater Protection Zone B (as identified on Map C9);

(ii) Lower Taieri (as identified on Map C15);

(iii) Kuriwao Basin (as identified on Map C16);

(iv) Pomahaka Basin (as identified on Maps C13 and C14);

(v) Earnscleugh Terrace (as identified on Map C4);

(vi) Dunstan Flats Groundwater Zone A (as identified on Map C4);

(vii) Maniototo Tertiary (as identified on Maps C5-C8);

(viii) Cromwell Terrace (as identified on Map C3);

(ix) Hawea Basin (as identified on Map C1);

(x) Wanaka Basin Cardrona Gravel (as identified on Map C1);

(xi) Papakaio (as identified on Map D1); and

(d) The take is for a rate no greater than 3.5 l/s, and 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 Conditions (b) to (d) above, the take is for a rate no greater than 1.5 l/s, and 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 12.2.3.4, for the aquifer from which the taking of water under this rule is occurring.

12.2.2.3 *[Unchanged]*

12.2.2.4 Except as provided for by Rule 12.2.1.1, the taking of groundwater from within 100 metres of the main stem of the Clutha or Kawarau Rivers, or from Lakes Wanaka, Hawea, Wakatipu, Dunstan and 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.

12.2.2.5 Except as provided for by Rules 12.2.1.1 to 12.2.2.4, the taking 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 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 any 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.

12.2.2A Controlled activity: Consent required but always granted

12.2.2A.1 The taking of groundwater 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 of surface water in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) The means and timing of the take, and the rate of take; and

(b) The quantity of water required to meet the needs of the community; 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.

12.2.3 Restricted discretionary activities: Resource consent required

12.2.3.1 ~~The taking of groundwater from the Shag and Kakanui-Kauru Alluvium Aquifers:~~

~~(i) The minimum flows in this rule apply to the taking of groundwater from the Shag Alluvium Aquifer (as identified on Map C11), and from the Kakanui-Kauru Alluvium Aquifer (as identified on Map C10), under a resource consent.~~

~~(ii) This rule does not apply to any taking of groundwater provided for by:~~

~~(a) Section 14(3)(b) and (e) of the Act; or~~

~~(b) Rules 12.2.2.1 to 12.2.2.3; or~~

~~(c) A resource consent for any taking of groundwater that is the subject of Rule 12.2.3.2, 12.2.3.3 or 12.2.4.1.~~

~~(iii) The taking of groundwater from:~~

~~(a) The Shag Alluvium Aquifer, is subject to the minimum flow set in Schedule 2A for the Shag catchment area; or~~

~~(b) The Kakanui-Kauru Alluvium Aquifer, is subject to the minimum flow set in Schedule 2A for the Kakanui catchment area,~~

~~if the taking of groundwater was established under a resource consent or other authority:~~

~~(c) Granted before 28 February 1998, or~~

~~(d) Granted after 28 February 1998, but was applied for prior to 28 February 1998; or.~~

~~(e) Granted to replace a resource consent or authority of the kind referred to in paragraph (a) or (b).~~

~~(iv) Except as provided in paragraph (iii) of this rule, the taking of groundwater from the Shag Alluvium Aquifer is subject to a minimum flow which is not less than either:~~

~~(a) 50% of the natural flow of the associated river at a point specified in a resource consent; or~~

~~(b) The natural mean flow of the associated river at a point specified in a resource consent,~~

~~as the Otago Regional Council determines in granting a resource consent.~~

~~(v) Except as provided in paragraph (iii) of this rule, the taking of groundwater within the first supplementary allocations specified in Schedule 2B from the Kauru-Kakanui Alluvium Aquifer is subject to minimum flows specified in Schedule 2B.~~

~~(vi) The taking of groundwater, subject to Rule 12.2.3.5 and:~~

~~(a) Subject to a minimum flow set in accordance with paragraph (iii) of this rule; or~~

~~(b) Subject to a minimum flow set in accordance with paragraph (iv) or (v) of this rule,~~

~~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 12.2.3.4.~~

~~(vii) 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; or~~

~~(c) Granted to replace a resource consent of the kind referred to in paragraph (a) or (b),~~

~~for the taking of groundwater from the Shag or Kakanui-Kauru Alluvium Aquifers. 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) or (iv) of this rule to be met, the volume and rate of take to be measured in accordance with Policy 9.4.22 and the taking to be subject to Rule 12.2.3.5 as soon as practicable after the Plan becomes operative.~~

12.2.3.1A The taking of groundwater from any Schedule 2C aquifer or from within 100 metres of any perennial surface water body, and the use of that groundwater, is a ***restricted discretionary*** activity, if the take meets all standards and terms set out under Rules 12.1.4.1, 12.1.4.2, 12.1.4.4 to 12.1.4.6 that apply to the proposed take, as if the take is surface water.

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 ~~The taking of groundwater from the aquifers identified in Schedule 4, applied for prior to 28 February 1998:~~

~~(i) This rule applies to the taking of groundwater, from the aquifers identified in Schedule 4, if the taking was established under 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) This rule does not apply to any taking of groundwater provided for by:~~
~~(a) Section 14(3)(b) and (c) of the Act; or~~
~~(b) Rules 12.2.2.1 to 12.2.2.3; or~~
~~(c) A resource consent for any taking of groundwater that is the subject of Rule 12.2.3.1, 12.2.3.3 or 12.2.4.1.~~

~~(iii) The taking of groundwater 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 12.2.3.4.~~

~~(iv) Except as provided for in paragraph (v) of this rule, the restriction levels set by Schedule 4, and Rule 12.2.3.5, do not apply to the taking of groundwater under this rule.~~

~~(v) Within the period from 2 October 2001 to 2 October 2021, the restriction levels set by paragraph (iv) of Rule 12.2.3.3 shall affect the exercise of every resource consent or other authority, of the kind referred to in paragraph (i) of this rule. The conditions of all such consents may be reviewed by the Otago Regional Council under Sections 128 to 132 of the Act to enable the restriction levels set by Schedule 4 to be met, the volume and rate of take to be measured in accordance with Policy 9.4.22 and the taking to be subject to Rule 12.2.3.5.~~

12.2.3.2A Except as provided for by 12.2.3.1A, the taking of groundwater from any point 100 metres or more from any perennial surface water body, and the use of that groundwater, is a ***restricted discretionary*** activity, if:

(a) The volume sought is within:
  (i) The available allocation volume identified in Schedule 4A; or
  (ii) 50% of the calculated mean annual recharge for any aquifer not specified in Schedule 4A; and
(b) Aquifer restriction levels identified in Schedule 4B are met; and
(c) Where the rate of surface water depletion is greater than 5 l/s, as calculated using Schedule 5A:
  (i) Primary allocation is available; and
  (ii) For the Waitaki catchment, allocation to activities set out in Table 12.1.4.4A 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 ~~Other taking of groundwater from the aquifers identified in Schedule 4:~~

~~(i) Except as provided for by Rule 12.2.3.2, this rule shall affect any take of groundwater from the aquifers identified in Schedule 4.~~

~~(ii) The restriction levels in this rule apply to the taking of groundwater, under a resource consent, from the aquifers identified in Schedule 4.~~

~~(iii) This rule does not apply to any taking of groundwater provided for by:~~

~~(a) Section 14(3)(b) and (e) of the Act; or~~

~~(b) Rules 12.2.2.1 to 12.2.2.3; or~~

~~(c) A resource consent for any taking of groundwater that is the subject of Rule 12.2.3.1, 12.2.3.2 or 12.2.4.1.~~

~~(iii) The taking of groundwater subject to Rule 12.2.3.5 and subject to the restriction levels set by Schedule 4 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 12.2.3.4.~~

12.2.3.4 Restricted discretionary activity considerations

In considering any resource consent for the taking and use of groundwater in terms of Rules ~~12.2.3.1,~~ 12.2.3.2A ~~and 12.2.3.3~~, the Otago Regional Council will restrict the exercise of its discretion to the following:

~~(a)~~(i) The amount of water to be taken and used; and

~~(i)~~(ii) The means and timing of the take, and the rate of take; and

~~(j)~~(iii) The quantity of water required for the intended purpose of use; and

(iv) The proposed method(s) of delivery and application of the water taken (including efficiency); and

(v) The source(s) of water available to be taken; and

(vi) The location(s) of the use of the water, when it will be taken out of a local catchment; and

(vii) Any arrangement for cooperation with other takers, with the ability to respond flexibly to local circumstances, that has been entered into; and

(viii) Any water storage facility available for the water taken, and its capacity; and

~~(b)~~(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

~~(c) Any adverse effect on a connected surface water body; and~~

~~(d) In the case of takes from the Shag and Kakanui-Kauru Alluvium Aquifers, the primary and supplementary allocation limits for the catchment area, including any identified in Aschedule 2; and~~

~~(e) In the case of takes from the Shag and Kakanui-Kauru Alluvium Aquifers, the minimum flows to be applied to the take of water, if consent is granted, including any identified in Schedule 2; and~~

~~(f) In the case of takes from the Shag and Kakanui-Kauru Alluvium Aquifers, where the minimum flow is to be measured, if consent is granted; and~~

~~(g)~~(x) Any adverse effect on any lawful take of water, if consent is granted, including potential bore interference; and

(xi) Any actual or potential effects on any surface water body; and

(xii) Whether any part of the take would consitutute primary allocation from any connected surface water body; and

(xiii) The availability of primary allocation for the connected surface water body; and

(xiv) The consent being exercised or suspended in accordance with any Council recognised rationing regime in that catchment or, in its absence, the Council; and

~~(h)~~(xv) Any adverse effect on the existing quality of groundwater in the aquifer; and

(xvi) Any adverse effect on a significant wetland value identified in Schedule 9 or any wetland higher than 800 metres above sea level; and

(xvii) Any financial contribution for Type B wetland values that are adversely affected; and

~~(k)~~(xviii) The duration of the resource consent; and

~~(l)~~(xix) The information, ~~and~~ monitoring and metering requirements; and

~~(m)~~(xx) Any bond; and

~~(n)~~(xxi) The review of conditions of the resource consent; and

(xxii) For resource consents in the Waitaki catchment the matters in (i) to (xix) above, as well as matters in Policies 6.6A.1 to 6.6A.6.

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~~3.1~~, 12.2.2.6 and 12.2.3.1A that, when the flow in the catchment in which the take occurs ~~Shag or Kakanui Rivers~~ is

equal to or less than a minimum flow set by or under ~~that~~ these rules, the Council may, by public notice, suspend all takinges to enable the minimum flow to be met. ~~that are subject to that minimum flow shall cease.~~

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 ~~or 2B~~ until the flow again exceeds the minimum flow specified in Schedule 2A ~~or 2B~~.

(ii) It is a term of any taking of groundwater under Rule 12.2.2.2, ~~and 12.2.3.3~~ 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 12.1.4.4A. 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 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 water can only occur if they are ~~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 12.2.1.1 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.

The taking and use of groundwater under Rules 12.2.2.1 ~~and 12.2.2.3~~ to 12.2.2.6 will have no more than minor adverse effects on the aquifer from which the water is taken, any ~~connected surface water body~~ 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 1B is a controlled activity in order that the needs of Otago's communities can continue to be met.

The taking of groundwater from aquifers under Rule 12.2.3.1A, above the minimum flows that apply in the relevant catchments, will maintain surface water levels and the groundwater volume of the aquifers, which will ensure recognised uses can continue.

The taking of groundwater from aquifers under Rules 12.2.3.2A, above the levels identified for the specified aquifers, will maintain the groundwater volume of the aquifers and will ensure the aquifers' recognised uses can continue. Allocating the take as groundwater and part primary allocation, where there is a surface water depletion greater than 5 l/s, will ensure that the effect of the take on the surface water body is recognised.

~~The taking of groundwater from the aquifers identified in Rules 12.2.3.1 to 12.2.3.5, above the minimum flows in the specified connected rivers, or above the levels identified for the specified aquifers, will maintain the groundwater volume of the aquifers and will ensure the aquifers' recognised uses can continue.~~

~~As such, t~~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 ~~to 12.2.3.5~~.

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.

15
Methods other than Rules

15.1 Introduction *[Unchanged]*

15.2 Liaison

15.2.1 *[Unchanged]*

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~~ies~~ 6.4.12 ~~and 9.4.12~~ 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 ~~and pressures~~, 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 will act in a timely and effective manner whenever restriction situations are imminent.

15.2.3 to **15.2.9** *[Unchanged]*

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** *[Unchanged]*

15.4 to **15.7** *[Unchanged]*

15.8 Methods for calculating allocation and applying minimum flows

15.8.1 Methodology for calculating consented 7-day take and assessed actual take

15.8.1.1 The Otago Regional Council will use the following process when calculating the consented 7-day take of any catchment area for the purposes of Policy 6.4.2(a)(ii) and 6.4.2(b)(ii):

(a) Establish the weekly rate of surface water take authorised by all consents existing in the catchment at 28 February 1998; 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 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 will be assigned on the basis of the 7-day mean annual low flow of that catchment.

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 *[Unchanged]*

15.9 *[Unchanged]*

16
Information Requirements

16.1 Introduction *[Unchanged]*

16.2 General information required *[Unchanged]*

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 quantity, rate and timing~~,~~ (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(s) where the water is to be used.
3. A description of the means of the take, delivery, storage (if any) and application to be used.
4. ~~With respect to an application for a new take,~~ An assessment of the effect of the take on other users of the source water body.

4A. A description of all possible sources of water, with an assessment of the economic, social, environmental and cultural costs and benefits of taking from each source.

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.

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.

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.

16.3.2 to **16.3.13** *[Unchanged]*

16.4 Provision of further information *[Unchanged]*

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 first supplementary water allocations and minimum flows for takes from the Kakanui catchment are also provided for.~~ 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, and Lake Tuakitoto catchments, as identified ~~mapped~~ 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)(i) for the whole catchments of the rivers and lakes. The catchment areas for the primary allocation limits set by Policy 6.4.2(a)(i) may be larger than those specified on Maps B1 to B5.

Schedule 2B specifies minimum flows that apply to ~~provides the first~~ specified blocks of supplementary allocation~~s~~ for ~~the Kakanui~~ some catchments. Additional ~~Further~~ supplementary allocation may be granted under Policies 6.4.9 and 6.4.10.

~~The minimum flows in this schedule were able to be established because there are monitoring sites for these catchments with adequate flow records, which have enabled the effects of taking on those flows to be determined.~~ 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, are considered against primary or supplementary allocation limits 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.

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~~y~~ 6.4.2(a)(i) 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)(i). That limit is exceeded in catchments where the consented takes as at 28 February 1998 set a

higher limit in accordance with Policy 6.4.2(a)(ii). The catchments in which the limit set by Policy 6.4.2(a)(i) is exceeded by Policy 6.4.2(a)(ii) (as of at 20 December 2008) are the Shag, Kakanui, Taieri, Lake Hayes 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)(i) (litres per second – instantaneous flow)**
Shag catchment (both minimum flows apply)	Goodwood Pump (MS 1) Craig Road (MS 2)	28 150	280 litres/sec *Shag catchment from mouth to headwaters*
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 litres/sec *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	
Welcome Creek catchment	Steward Road	700	600 *Welcome Creek catchment from mouth to headwaters (Also subject to Table 12.1.4.4A)*
Water of Leith catchment	Water of Leith at University Footbridge (MS 4)	94	140 litres/sec *Water of Leith catchment from mouth to headwaters*
Taieri River catchment upstream of Paerau	Paerau Dam (MS 5a)	850	4860 litres/sec *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 Sutton	Taieri River at Sutton (MS 6)	1250	
Taieri River catchment between Sutton and Outram	Taieri River at Outram (MS 6a)	2500	
Lake Hayes catchment area	Mill Creek at Fish Trap (MS 7)	180	260 litres/sec *Lake Hayes catchment from lake outlet to headwaters*
Manuherikia River catchment upstream of Ophir	Manuherikia River at Ophir (MS 8)	820	3200 litres/sec *Manuherikia catchment from mouth to headwaters*
Waitahuna River catchment	Waitahuna River at Tweeds Bridge (MS 9)	450	650 litres/sec *Waitahuna catchment from mouth to headwaters*
Lake Tuakitoto catchment	Lovells Creek at SH1 (MS 10)	5	30 litres/sec *Lake Tuakitoto catchment from mouth to headwaters*

2B Schedule of ~~the first~~ supplementary allocations blocks and specific minimum flows ~~for the Kakanui River~~ 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) ~~that trigger the minimum flow~~ See Maps B1-B5	Supplementary Allocation ~~limit~~ Block (litres per second – ~~as calculated on an~~ instantaneous ~~basis~~ flow)
Kakanui catchment (first supplementary allocation block)	October to April: 1050: 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.	October to April: 300
	May to September: 1500: 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.	May to September: 500
Kakanui catchment (second supplementary allocation block)	October to April: 1350: 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.	October to April: 300
	May to September: 2000: 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.	May to September: 500
Shag catchment (first supplementary allocation block)	650 At Craig Road (MS 2) 401 At Goodwood Pump (MS 1)	100

Shag catchment (second supplementary allocation block)	750 At Craig Road (MS 2) 501 At Goodwood Pump (MS 1)	100
Trotters Creek catchment (first supplementary allocation block)	130 At Matheson's weir	100
Waianakarua catchment (first supplementary allocation block)	311 At Browns Pump	100
Welcome Creek catchment (first supplementary allocation block	1000 At Steward Road	400 *(Also subject to Table 12.1.4.4A)*

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 Aquifer	C.A	Lindis catchment**
Cardrona Aquifer	C.B	Cardrona catchment upstream of the Mount Barker recorder site**
Lowburn Aquifer	C.C	Lowburn Stream*

* as given in Schedules 2A and 2B
** as provided for by Policies 6.4.2, 6.4.3 and 6.4.9

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, C15 and D1. 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 5.4.2 and 5.4.3 ~~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 *[Unchanged]*

3B Groundwater takes for the purpose of community water supply

Site No.	**Community Water Supply Takes** (at NZMS 260 Series Map Grid Reference)
1	Glenorchy Water Supply at E41:459-841.
2	Arthurs Point Water Supply at E41:686-713.
3	Dalefield Water Supply at F41:739-724.
4	Arrowtown Water Supply at F41:806-773.
5	Cromwell Water Supply at G41:119-671.
6	Alexandra Water Supplies at: G42:253-444; G42:263-454; and G42:271-442
7	Roxburgh Water Supply at G43:210-132.
8	Dunedin and Outram Water Supplies at: I44:956-803; I44:956-805; and I44:956-804.
9	Warrington Water Supplies at: I44:221-982; and I44:224-980
10	East Taieri Water Supply at I44:007-763.
11	Owaka Water Supply at H46:533-124.

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 annual allocation volumes for the taking of groundwater from aquifers identified in the C-series maps, in accordance with Policy 6.4.10A(a) 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.

4A Maximum Allocation Volumes for Groundwater Takes from Aquifers

Maximum allocation volumes for the aquifers listed in this Schedule have been set in accordance with Policy 6.4.10A

Aquifer Name	Map Reference	Maximum Allocation Volume (million cubic meters per year)
Note: This table will be added to through future plan change processes		

4B Restriction Levels for Groundwater Takes

~~The~~ Schedule 4B identifies water levels at which the taking of groundwater will be restricted, and ~~in accordance with Policies 9.4.4, 9.4.5 and 9.4.6 of this Plan. It also~~ identifies the nature of the restriction, in terms of a reduction in the take of water authorised by water permits, and the objectives of the restrictions with their associated anticipated environmental results.

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.

[Note change in table layout]

Aquifer See Maps D1 - D4	Aquifer Reference Bore See Maps D1 – D4	Aquifer maximum height (metres above datum)	Restriction levels (m)		
			25% restriction or ~~allocation committee~~ response in terms of Council recognised rationing regime*	50% restriction	100% restriction
~~Papakaio~~	~~Enfield School Bore~~	~~167.2~~	~~165.2~~	~~164.7~~	~~164.2~~
North Otago Volcanics – Deborah	Websters Well	130.8	128.8	128.3	127.8

Aquifer See Maps D1 - D4	Aquifer Reference Bore See Maps D1 – D4	Aquifer maximum height (metres above datum)	Restriction levels (m)		
			25% restriction or ~~allocation committee~~ response in terms of Council recognised rationing regime*	50% restriction	100% restriction
North Otago Volcanics – Waiareka	Isbister's Well	124.2	122.2	121.7	121.2
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	185.5	184	183.75	183.5

* 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.

Aquifer	Management Objectives	Environmental Result
Papakaio	Mean quarterly static pressure maintained to within 3.0 metres of Aquifer Maximum	▪ Surface water flows (Kakanui particularly) are not adversely affected; ▪ Existing free flowing artesian conditions are retained over the greater part of the aquifer; ▪ Aquifer yield is maintained; ▪ Any risk of land subsidence and/or irreversible compression of the aquifer is avoided.
North Otago Volcanics – Deborah	Mean 30-day static pressure maintained to within 3.0 metres of mean sea level (Otago datum)	▪ Surface water flows (Awamoa and Waiareka Creeks particularly) are not adversely affected; ▪ Bore interference is minimised; ▪ Aquifer yield is maintained; ▪ Risk of sea water intrusion is minimised
North Otago Volcanics – Waiareka	Mean 30-day static pressure maintained to within 3.0 metres of mean sea level (Otago datum)	▪ Surface water flows (Awamoa Creek and the Waiareka river particularly) are not adversely affected; ▪ Bore interference is minimised; ▪ Aquifer yield is maintained; ▪ Risk of sea water intrusion is minimised
Lower Taieri – West	Mean 30-day static pressure maintained to within -1.0 metres of mean sea level (Otago datum)	▪ Surface water flows are not adversely affected; ▪ Aquifer yield is maintained; ▪ Bore interference is minimised; ▪ Any risk of land subsidence and/or irreversible compression of the aquifer is avoided; ▪ Any risk of sea water intrusion is minimised

Lower Taieri – East	Mean 30-day static pressure maintained to within 3.0 metres of Aquifer Maximum	▪ Surface water flows (Silver Stream particularly) are not adversely affected; ▪ Aquifer yield is maintained; ▪ Bore interference is minimised; ▪ Any risk of land subsidence and/or irreversible compression of the aquifer is avoided; ▪ Any risk of sea water intrusion is minimised
Ettrick Basin	Mean 30-day static water level maintained to within 3.0 metres of Aquifer Maximum	▪ Surface water flows (Benger Burn particularly) are not adversely affected; ▪ Aquifer yield is maintained; ▪ Bore interference is minimised
Roxburgh Basin (Coal Creek Terrace)	Mean 7-day static water level maintained to within 2.0 metres of Aquifer Maximum	▪ Aquifer yield is maintained; ▪ Bore interference is minimised

5 Schedule of limits to instantaneous take of groundwater

5A Schedule of equations to determine stream depletion effects of the take of groundwater

~~This schedule identifies formulae that will be used to establish the limits of acceptable bore interference in accordance with Policy 9.4.7 of this Plan. These limits will be placed as conditions on permits to take groundwater, and may limit the instantaneous take of groundwater from any one bore in order to maintain existing access to water.~~

~~**Formulae that will be used to establish the limits of acceptable bore interference:**~~

~~**Unconfined conditions:**~~

~~$I \leq T (2 \times 10^{-4})$ ie. 0.2m per 1000m^2/day~~

~~**Confined conditions:**~~

~~$I \leq T (2 \times 10^{-3})$ ie. 2m per 1000m^2/day~~

~~Where:~~

~~I = permitted interference in metres~~

~~T = transmissivity in square metres per day~~

~~**Bore interference** The reduced ability of users in a localised area to take water from a bore, due to the taking of water from another bore, reducing the pressure and/or the level of groundwater.~~

~~**Confined aquifer** Any aquifer where the groundwater is confined under pressure by an overlying strata which is impermeable or semi-permeable. If the confining layer is penetrated, groundwater will rise above the bottom of the confining layer. (See Artesian pressure.)~~

~~**Unconfined aquifer** Any aquifer in which the upper limit of the zone of saturation is at atmospheric pressure.~~

~~**Transmissivity** The degree to which an aquifer allows water to pass through it.~~

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.

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

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

Where:

Q_s	is the rate of stream depletion (cubic length per time);
Q_w	is the pumping rate of the well (cubic length per time);
r	is the perpendicular distance from the point of groundwater take to the surface water body (length);
S	is the storativity (or specific yield) of the aquifer (dimensionless);
T	is the transmissivity of the aquifer (square length per time);
t	is time; and
'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.

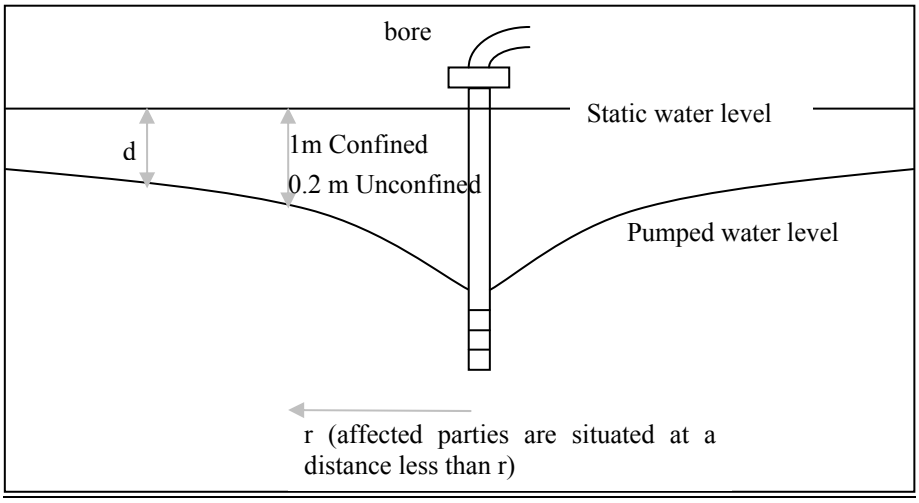
These situations are often not immediately discernable and may require a higher level of assessment to distinguish the nature of connection between groundwater and surface water. Where an applicant seeks that Policy 6.4.1A should not apply, and that the take should be considered as a full groundwater 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.

[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. pp1696 – 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, Book4, 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 and the 'Theis' equation:

$d=QW(u)/4\pi T$ 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 - u2/2·2! + u3/3·3! - …
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.

extracts…

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.

Note: A **new resource consent** is where the provisions of Section 124 of the Resource Management Act do not apply.

A **replacement resource consent** is where the provisions of Section 124 of the Resource Management Act apply.

~~**Use** In relation to the use of water, is the passive use of water that does not involve any extraction, damming, diversion or discharge.~~

2A Water management groups

Water management groups established in terms of Policy 6.4.12A, provide the opportunity for groups of water users to become more responsible for managing their own water taking by being delegated specified functions by the Otago Regional Council under the Resource Management Act 1991. Members must agree to be bound by the group, and must satisfy the Council that they are able to exercise delegated functions responsibly. Lists 2A.1 and 2A.2 set out the Council's requirements for the appointment and function 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 appointment of a water management group

For a group of water users to be appointed 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 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 act as an agent of the Council for the specified consents; and

(d) The water management group is able to provide documentary evidence that their members and scheduled consent holders agree to be bound by the group.

2A.2 List of functions of a water management group

A water management group which has been appointed 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;

(c) Must have amendments of its form and rules approved by the Council;

(d) May have its authority to act as an agent of the Council revoked, in part or in full, either:

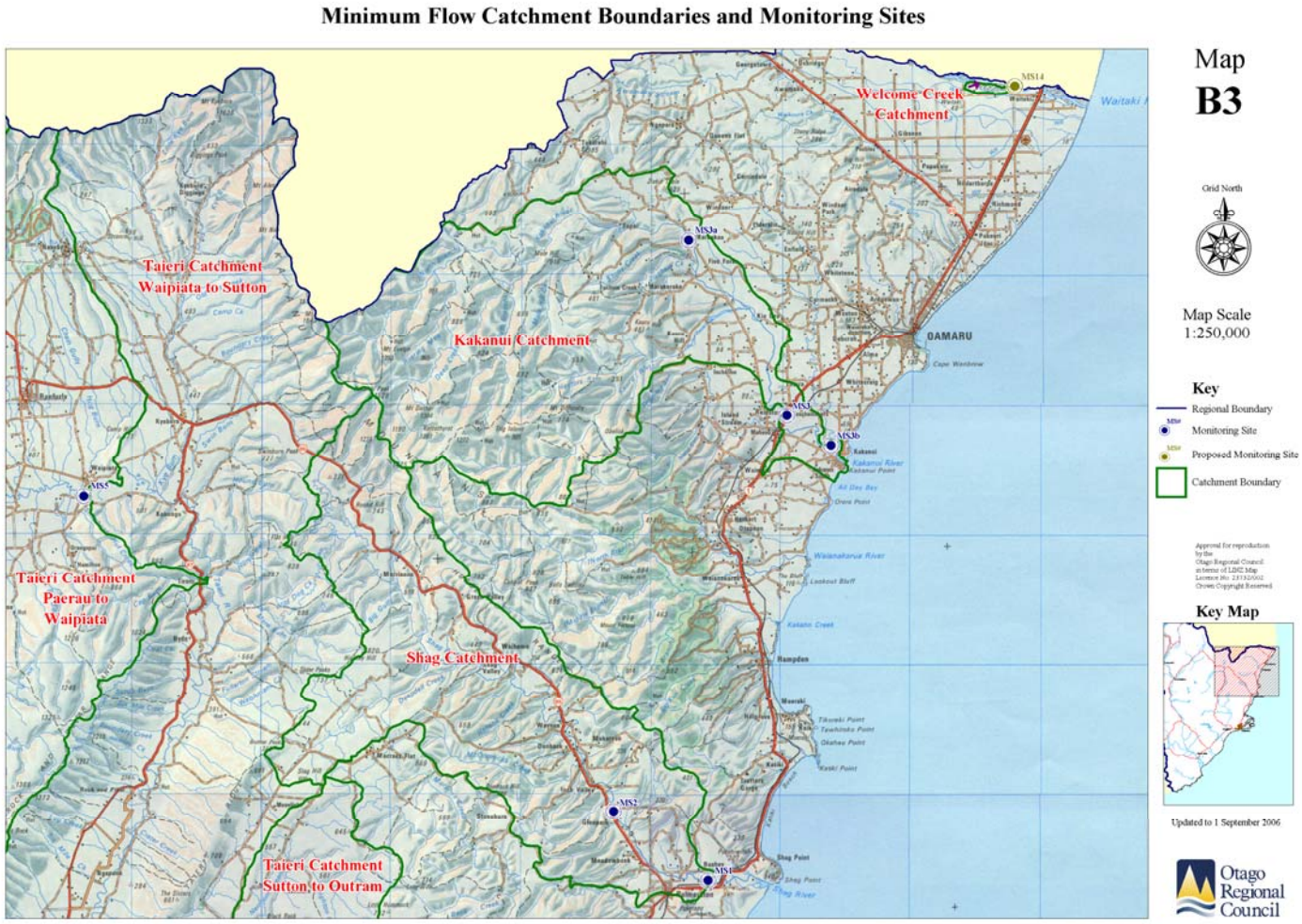
  (i) On its request; or

  (ii) On receipt of not less than 6 months written notice by the Council; and

(e) Must report annually to the Council on the operation of the group and the exercise of powers as an agent of the Council.

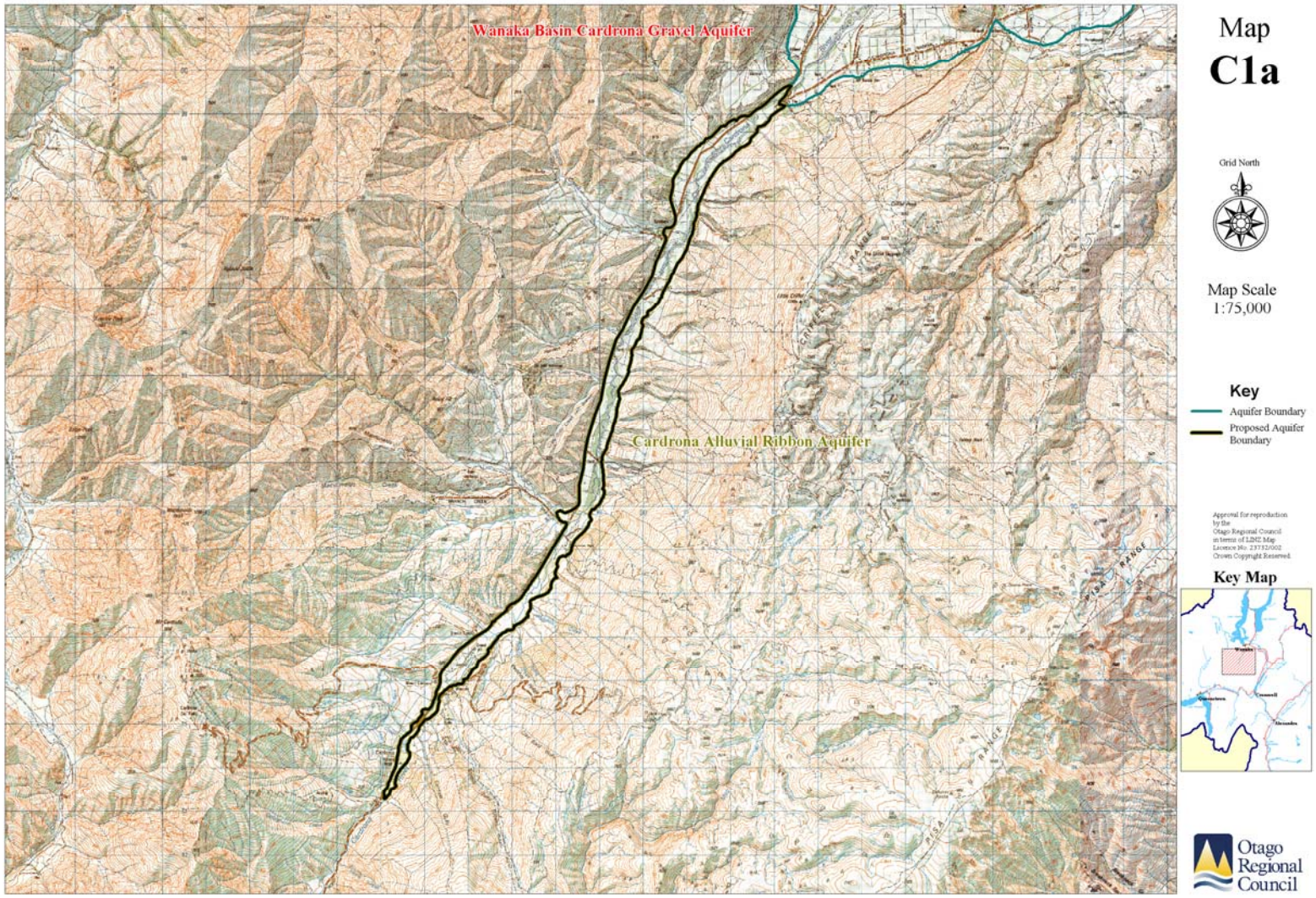
Maps Section B: Proposed maps for the Steward Road Monitoring Site, and Cardrona Alluvial Ribbon, Lake Wanaka Cardrona Gravel, Lindis Alluvial Ribbon, Hawea Basin and Lowburn Alluvial Ribbon Aquifers

1: Proposed amendment to Map B3



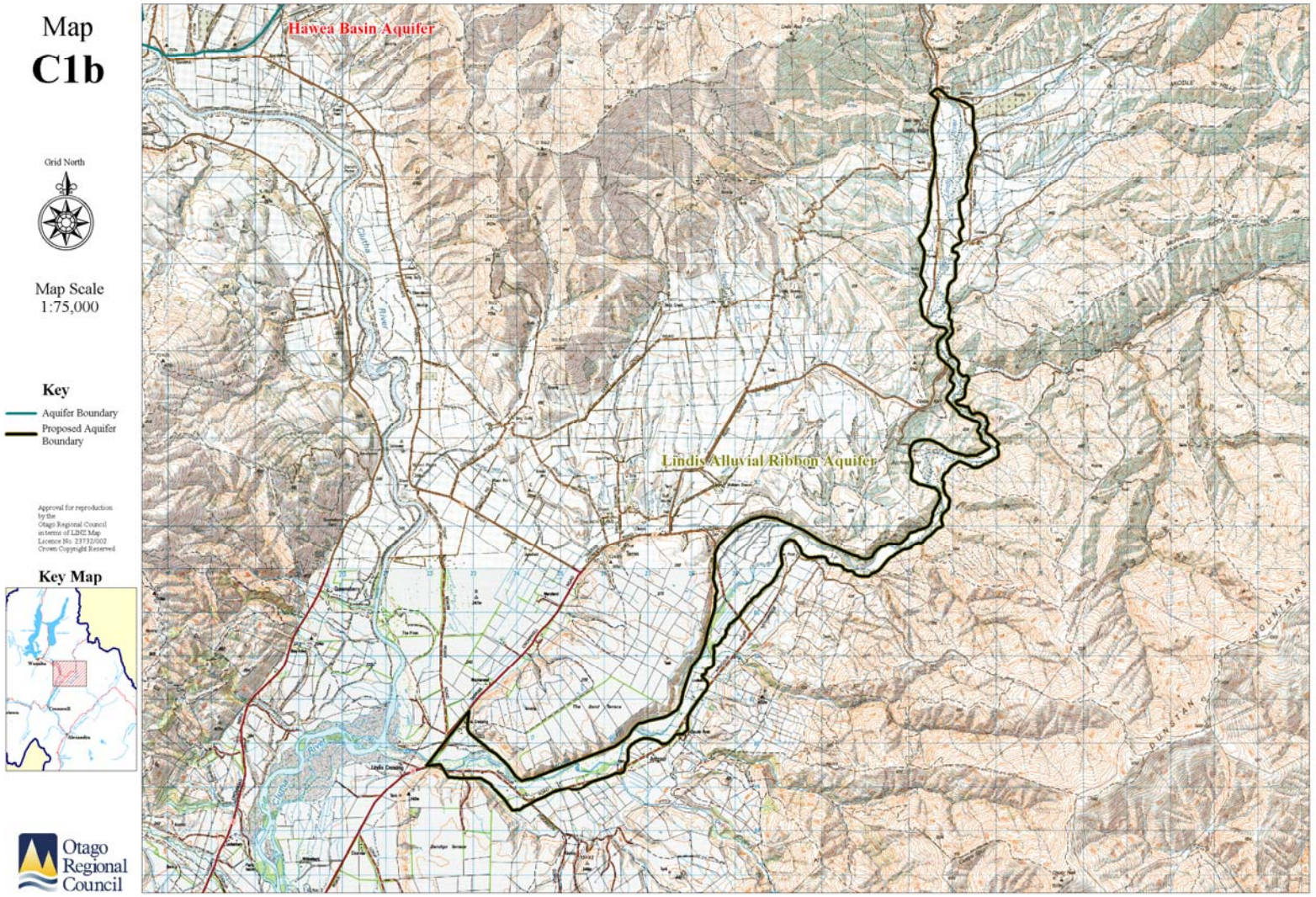
2: Proposed new Map C1a

Cardrona Alluvial Ribbon and Wanaka Basin Cardrona Gravel Aquifers



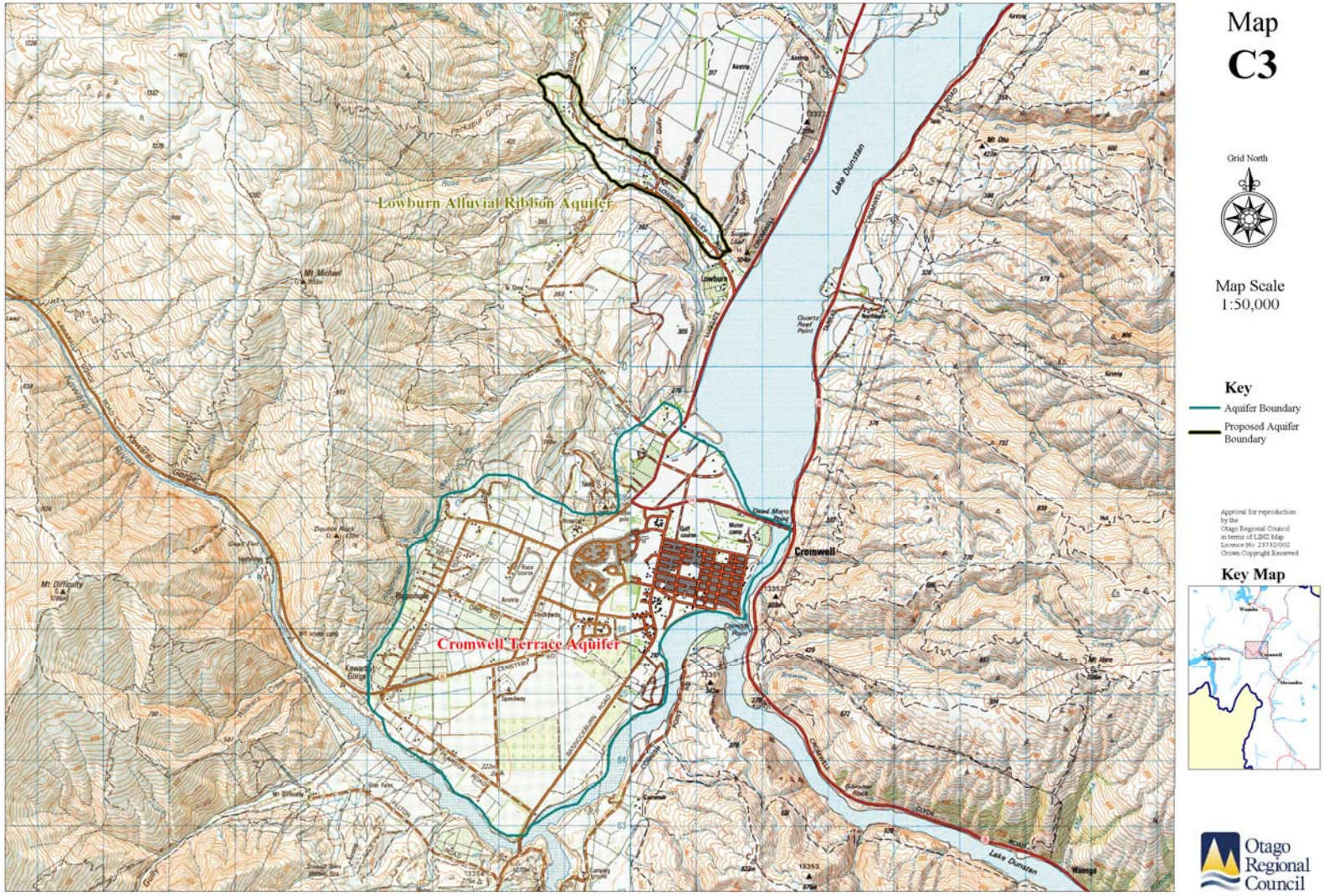
3: Proposed new Map C1b

Lindis Alluvial Ribbon and Hawea Basin Aquifers



4: Proposed amendments to Map C3

Lowburn Alluvial Ribbon and Cromwell Terrace Aquifers



Consequential and minor changes

<table>
<tr><th>Operative Plan Provision</th><th>Operative Plan Page number</th><th>Detail of consequential or minor change</th></tr>
<tr><td>Page numbers</td><td>All pages</td><td>Change page numbers.</td></tr>
<tr><td>Footer</td><td>All pages</td><td>Change each footer to read:

Regional Plan: Water for Otago (Updated to <s>1 September 2006</s> <date to be inserted>)</td></tr>
<tr><td>Title page</td><td>Page i</td><td>Change the date to read:

Updated to <s>1 September 2006</s> <date to be inserted></td></tr>
<tr><td>New ISBN number</td><td>Page i (for Plan)
Index (for Maps)</td><td>Change the ISBN numbers to read:

ISBN <s>1-877265-29-2</s> <New ISBN numbers to be obtained and inserted>
ISBN <s>1-877265-30-6</s> <New ISBN numbers to be obtained and inserted></td></tr>
<tr><td>Table of Key Events</td><td>Page iv</td><td>Add the following to the end of the table:

<table>
<tr><th>Key event</th><th>Date notified</th><th>Date decisions released</th><th>Date operative</th></tr>
<tr><td><u>Plan Change 1C (Water Allocation and Use) to the Regional Plan: Water</u></td><td><u><Date to be inserted></u></td><td><u><Date to be inserted></u></td><td><u><Date to be inserted></u></td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Operative Plan Provision</th><th>Operative Plan Page number</th><th>Detail of consequential or minor change</th></tr>
<tr><td rowspan="2">Table of Contents</td><td>Pages vi–xi</td><td>Change page numbers.</td></tr>
<tr><td>Page ix</td><td>Add the following:

<u><page number to be inserted></u></td></tr>
<tr><td>Section 1.4 Process of Plan preparation</td><td>Page 5</td><td>Add the following paragraph at the end before Section 1.4.1:

<u>Proposed Plan Change 1C (Water Allocation and Use) was notified on 20 December 2008</u> to improve the overall effectiveness with which we use our limited water resources that enables the community to go forward and benefit from future opportunities to use water<u>. <number to be inserted> submissions and <number to be inserted> further submissions were received. Following the hearing, decisions on the submissions received were released on <date to be inserted>. Plan Change 1C (Water Allocation and Use) was made operative on <date to be inserted>.</u></td></tr>
<tr><td>Cross references</td><td>All pages</td><td>Add the new Issues, Objectives, Policies, Rules, Other Methods, Schedules and Appendices to the cross references.</td></tr>
<tr><td>Schedule 3B</td><td>Page 336</td><td>3B Groundwater takes for the purpose of community water supply

<table>
<tr><th>Site No.</th><th>Community Water Supply Takes (at <u>NZMS 260 Series Map</u> Grid Reference)</th></tr>
<tr><td>1</td><td>Glenorchy Water Supply at E41:459-841.</td></tr>
<tr><td>2</td><td>Arthurs Point Water Supply at E41:686-713.</td></tr>
<tr><td>3</td><td>Dalefield Water Supply at F41:739-724.</td></tr>
<tr><td>4</td><td>Arrowtown Water Supply at F41:806-773.</td></tr>
<tr><td>5</td><td>Cromwell Water Supply at G41:119-671.</td></tr>
<tr><td>6</td><td>Alexandra Water Supplies at:
G42:253-444;
G42:263-454; and
G42:271-442</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Operative Plan Provision</th><th>Operative Plan Page number</th><th>Detail of consequential or minor change</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>7</td><td>Roxburgh Water Supply at G43:210-132.</td></tr>
<tr><td>8</td><td>Dunedin and Outram Water Supplies at:
I44:956-803;
I44:956-805; and
I44:956-804.</td></tr>
<tr><td>9</td><td>Warrington Water Supplies at:
I44:221-982; and
I44:224-980</td></tr>
<tr><td>10</td><td>East Taieri Water Supply at I44:007-763.</td></tr>
<tr><td>11</td><td>Owaka Water Supply at H46:533-124.</td></tr>
</table>
</td></tr>
<tr><td>Map B3</td><td>Not applicable</td><td>Change the date to read:

Updated to ~~1 September 2006~~ <date to be inserted></td></tr>
<tr><td>Map C Index</td><td>Not applicable</td><td>Add the Cardrona Alluvial Ribbon, Lake Wanaka Cardrona Gravel, Lindis Alluvial Ribbon, Hawea Basin and Lowburn Alluvial Ribbon Aquifer boundaries to Map C Index (see Attachment 1).</td></tr>
</table>

Attachment 1: Consequential change to Map C Index (reference number 128)