

# **Proposed Plan Change 4B (Groundwater allocation)**

## **Section 32 Evaluation Report**

# **Regional Plan: Water for Otago**

*This Section 32 Evaluation Report should be read in conjunction with  
Proposed Plan Change 4B (Groundwater allocation)  
to the Regional Plan: Water for Otago.*



## Table of Contents

<b>1.</b>	<b>Introduction</b> .....	<b>1</b>
<b>2.</b>	<b>Background</b> .....	<b>1</b>
<b>3.</b>	<b>Calculating the Maximum Allocation Volume (Limit)</b> .....	<b>1</b>
3.1	<i>How takes are estimated: Assessed vs consented maximum annual take</i> .....	2
3.2	<i>Calculating mean annual recharge (MAR)</i> .....	3
<b>4.</b>	<b>Addressing over-allocation</b> .....	<b>3</b>
4.1	<i>Applications for new takes in over-allocated aquifers</i> .....	4
4.2	<i>Applications for new takes that result in over-allocation</i> .....	4
4.3	<i>Non-consumptive takes and short-term dewatering takes</i> .....	5
4.4	<i>Transition: Replacing existing consents, considering past water use</i> .....	6
<b>5.</b>	<b>RMA simplifying and streamlining</b> .....	<b>7</b>
5.1	<i>The MAL as an environmental limit</i> .....	7
5.2	<i>Clear information on allocation status of aquifers</i> .....	7
5.3	<i>Removal of Explanations and Principal Reasons for Adopting</i> .....	7
<b>6.</b>	<b>Consultation</b> .....	<b>8</b>
<b>7.</b>	<b>Conclusion</b> .....	<b>8</b>
<b>8.</b>	<b>Reference material</b> .....	<b>8</b>

## Abbreviations

Council	Otago Regional Council
Proposed plan change / plan change	Proposed Plan Change 4B (Groundwater allocation)
MAL	Maximum allocation limit
MAR	Mean annual recharge
RMA	Resource Management Act 1991
Water Plan	Regional Plan: Water for Otago (operative at 1 May 2014)

**Note: use of section/Section:**

section	A reference to another section in this report. A reference to a section of the Water Plan.
Section	A Section of the RMA.

## 1. Introduction

Proposed Plan Change 4B (Groundwater allocation) clarifies the controls in the Regional Plan: Water for Otago (Water Plan) for avoiding over-allocation of groundwater in Otago, while retaining the established principles of groundwater allocation.

The plan change affects all water managed as groundwater under Policy 6.4.1A.

Section 32 of the RMA (in effect from 3 December 2013) requires an evaluation of the realistically practicable options, assessing their effectiveness and efficiency and summarising the reasons for deciding on the proposed provisions. This report makes that assessment, and should be read in conjunction with the proposed plan change.

As the proposed plan change is intended to clarify some of the existing groundwater provisions in the Water Plan, there will not to be any change to the environmental, economic, social and cultural effects from the amended groundwater regime in the Water Plan. This Section 32 evaluation reflects the limited implications of the plan change.

## 2. Background

Plan Changes 1C (Water Allocation and Use) and 4A (Groundwater and North Otago Volcanic Aquifer) introduced the following principles to the Water Plan:

- To prohibit applications for new groundwater takes from fully allocated aquifers;
- To restrict the volumes for which existing consents from a fully allocated aquifer would be replaced, to the volumes that have been taken under the existing consent.

In 2012 ORC staff undertook a review of the Water Plan provisions relating to groundwater allocation in accordance with RMA Section 35(2)(b). This review has shown that the clarity of the Plan's provisions and their efficiency and effectiveness for implementing the two principles described above could be improved.

In particular, provisions relating to when the prohibition applies and how the transition is made from "over-allocation" to the more sustainable allocation volume identified in Schedule 4A, or the default of 50% of the mean annual recharge (MAR).

In recent years ORC staff have calculated MAR of various aquifers to assess available groundwater, and these figures have been used to make decisions on applications to take groundwater. The quantity would remain fixed until a plan change establishes a Mean Annual Volume in Schedule 4A. The Section 35(2)(b) review recognised the value in providing more clarity and certainty around MAR quantities.

## 3. Calculating the Maximum Allocation Volume (Limit)

Under the operative Water Plan, a "maximum allocation volume" was established for every aquifer in Otago. This quantity is a maximum allocation limit in terms of the National Policy Statement on Freshwater Management. Plan Change 4B refers to this as the maximum allocation limit (MAL) to define the volume of water that is available for taking from an aquifer. The MAL is appropriate for managing the cumulative effects of groundwater takes on long-term storage of an aquifer and on outflows to surface water bodies.

### 3.1 Estimating takes: Assessed vs consented maximum annual take

The estimated annual volume of take allocated from aquifers listed in Schedule 4A corresponds to the “assessed maximum annual take” as calculated through Method 15.8.3.1. However, for all other aquifers this volume corresponds to the “consented maximum annual take”. The inconsistency between methods for calculating the estimated annual volume of take can cause an aquifer previously considered to be over-allocated based on its MAR to become under-allocated as soon as it is included in Schedule 4A.

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#### **Option 1**      **Maintain the status quo**

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- BENEFITS:**
- No plan change required.
  - Conservative approach that protects any aquifer not listed in Schedule 4A.
- COSTS/RISKS:**
- Administrative inefficiencies caused by the use of different assessment methods, resulting in increased consent processing costs for applicants.
  - May needlessly restrict new takes from aquifers outside Schedule 4A because consent holders are unlikely to fully exercise their consents at all times. This could result in fewer economic opportunities.
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#### **Option 2**      **Define the estimated annual allocation limit of all aquifers as the consented maximum annual take**

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- BENEFITS:**
- Conservative approach that protects aquifers if water users fully exercise their consents.
  - Consistency between provisions improves the Plan’s clarity and user-friendliness.
- COSTS/RISKS:**
- May needlessly restrict new takes because consent holders are unlikely to fully exercise their consents at all times. This could result in fewer economic opportunities.
  - Method has been criticised by the Environment Court.
  - Requires updating ORC’s systems for calculating volumes allocated from an aquifer.
  - Plan change required.
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#### **Option 3**      **Define the estimated annual allocation limit of all aquifers as the assessed maximum annual take**

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- BENEFITS:**
- Allows for new groundwater takes where the aquifer is able to support them and increases the economic opportunities for local communities.
  - Balanced approach that better reflects actual taking from the aquifer.
  - Aligns with Environment Court decision on Lynton Dairy Ltd (Decision C108/2005).
  - Method 15.8.3.1 promotes administrative efficiency and reduces consent processing costs for applicants.
  - Does not require updating current ORC administrative systems and procedures.
  - Consistency between plan provisions improves clarity and user-friendliness.
- COSTS/RISKS:**
- Potential to over-allocate if Method 15.8.3.1 under-estimates actual takes.
  - Plan change required.
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### **RECOMMEND OPTION 3 (NEW POLICIES 6.4.10A & 6.4.10A1, AMENDED METHOD 15.8.3.1)**

Using one single method for calculating the estimated annual volume of take ensures that the Water Plan is consistent throughout and that allocation in an aquifer is assessed in the same way whether or not it has been included in Schedule 4A. This improves the Water Plan's clarity and allows for more efficient plan administration.

Using the assessed maximum annual take, calculated with Method 15.8.3.1, is the most appropriate way to assess the estimated annual volume being taken under groundwater permits, as new groundwater takes would not be unnecessarily restricted. The environmental risk of under-estimating the actual takes is also considered low because Method 15.8.3.1 is based on reasonable and realistic assumptions regarding actual water use.

Should this situation arise, however, proposed Policy 6.4.10A2 recognises the value of existing takes when consents are replaced (see section 4 below).

A Glossary definition of "Assessed maximum annual take" can refer to the Method.

Overall, option 3 maximises economic opportunities and reduces costs for applicants, while ensuring the sustainable management of the resource.

## **3.2 Calculating mean annual recharge (MAR)**

Assessing the MAL for aquifers not included in Schedule 4A requires determining the MAR. The method for calculating MAR is not described in the Water Plan.

<b>Option 1</b>	<b>Maintain the status quo</b>
<b>BENEFITS:</b>	<ul style="list-style-type: none"><li>• No plan change required.</li></ul>
<b>COSTS/RISKS:</b>	<ul style="list-style-type: none"><li>• Risk of inconsistencies among Plan administrators.</li><li>• Use of an inappropriate method for calculating the MAR may result in unnecessarily restricting the taking of groundwater or the allocation of water beyond sustainable levels.</li></ul>
<b>Option 2</b>	<b>Include a new Schedule 4D, the method for calculating MAR</b>
<b>BENEFITS:</b>	<ul style="list-style-type: none"><li>• Greater clarity and consistency in terms of how MAR is determined.</li><li>• Avoids the use of inappropriate methods for calculating the MAR.</li></ul>
<b>COSTS/RISKS:</b>	<ul style="list-style-type: none"><li>• Plan change required to set up Schedule 4D.</li></ul>

### **RECOMMEND OPTION 2 (NEW SCHEDULE 4D)**

It is appropriate to include a schedule for calculating MAR in the Water Plan because it assists with the sustainable management of the resource, and provides greater consistency, certainty and clarity for plan users.

## **4. Addressing over-allocation**

The Water Plan seeks to impose a sinking lid on over-allocated aquifers and avoid any further allocation of water from these aquifers through the use of prohibited activity rules for consumptive takes. The existing plan provisions, however, do not always prevent new takes from over-allocated aquifers nor do they avoid aquifers becoming over-allocated.

## 4.1 Applications for new takes in over-allocated aquifers

Rule 12.0.1.3 seeks to prohibit new water takes from over-allocated aquifers, other than those allowed under the permitted activity rules in Section 12.1.2 of the Water Plan. However, the rule does not give full effect to this intention as it does not explicitly prohibit new groundwater permits beyond the MAL.

The reference to a date in Policy 6.4.10A (see introduction to section 3 above) prevents all current consents from being incorporated in the determination of an aquifer's MAL.

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<b>Option 1</b>	<b>Maintain the status quo</b>
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**BENEFITS:**

- No plan change required.

**COSTS/RISKS:**

- Allocation in over-allocated aquifers could be increased.
- Increased risk of water storage depletion, aquifer compaction and groundwater contamination.
- Rule 12.0.1.3 does not give effect to Objective 6.3.2A and Policy 6.4.10A.
- Cost of preparing and processing consent applications that are likely to be declined.

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<b>Option 2</b>	<b>Amend Rule 12.0.1.3 and Policy 6.4.10A to effectively prohibit applications for groundwater takes from an over-allocated aquifer</b>
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**BENEFITS:**

- Allocation in over-allocated aquifers bound to decrease to sustainable levels.
- Gives better effect to Objective 6.3.2A and Policy 6.4.10A.
- Provides certainty to Water Plan users.
- Avoids unnecessary costs for applicants.
- Promotes administrative efficiency (no need to consider applications for new takes from over-allocated aquifers).

**COSTS/RISKS:**

- Plan change required.

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### RECOMMEND OPTION 2 (NEW POLICY 6.4.10A1, NEW RULE 12.0.1.3)

Prohibiting applications for groundwater takes from over-allocated aquifers is the most appropriate way to reduce over-allocation because it gives effect to the intent of the policy framework and provides more certainty for plan users. Recommended option 2 provides more surety (of supply) and investment security for existing water takers and reduces the plan administration costs.

## 4.2 Applications for new takes that result in over-allocation

Rule 12.0.1.4 seeks to prohibit new water takes that would cause aquifers to become over-allocated, other than those allowed under the permitted activity rules in Section 12.1.2 of the Water Plan. However, the Rule fails to give effect to this intention because it prohibits only those water takes that would cause the MAL to exceed the relevant limit and new consents in over-allocated aquifers cannot cause the MAL to exceed this limit.

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<b>Option 1</b>	<b>Maintain the status quo</b>
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**BENEFITS:**

- No plan change required.

**COSTS/RISKS:**

- Allocation may become unsustainable (risk aquifer compaction, depletion).

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- Rule 12.0.1.4 does not give effect to Objective 6.3.2A and Policy 6.4.10A.
- Cost of preparing and processing consent applications that are likely to be declined.

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**Option 2**      **Amend prohibited activity rule to effectively prohibit applications for groundwater takes that would cause an aquifer being over-allocated**

- BENEFITS:**
- Promotes good environmental management and avoids over-allocation of aquifers.
  - Gives better effect to Objective 6.3.2A and Policy 6.4.10A.
  - Provides certainty to Water Plan users.
  - Avoids unnecessary costs for applicants.
  - Promotes administrative efficiency (no need to consider applications for new takes from over-allocated aquifers).

- COSTS/RISKS:**
- Plan change required.
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**RECOMMEND OPTION 2 (NEW RULE 12.0.1.3)**

Prohibiting applications for groundwater takes that cause the aquifer being over-allocated is an effective way to prevent over-allocation of aquifers. Recommended option 2 provides more surety (of supply) and investment security for existing water takers and reduces the plan administration costs.

### 4.3 Non-consumptive takes and short-term dewatering takes

Non-consumptive takes are takes where use of the water results in no net loss from the source water body. There may be some temporary local reduction in aquifer water levels, but it is only short-term, for example during construction activities.

Existing Policy 6.4.10A and Method 15.8.1.3 exclude non-consumptive takes when calculating the estimated annual volume of take from aquifers, because their environmental impacts are considered *de minimis*. This approach is not reflected in the prohibited activity rules for takes considered groundwater in terms of Policy 6.4.1A.

Similarly, taking for the temporary dewatering of a site for placing or maintaining a structure is prohibited if the water present is in an over-allocated aquifer.

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**Option 1**      **Maintain the status quo**

- BENEFITS:**
- No plan change required.

- COSTS/RISKS:**
- Non-consumptive and temporary dewatering takes from over-allocated aquifers are needlessly restricted.
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**Option 2**      **Exclude non-consumptive and temporary dewatering takes from the prohibited activity rules**

- BENEFITS:**
- Provides better opportunities for water take and development.
  - Greater consistency between plan provisions

- COSTS/RISKS:**
- Plan change required.
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## RECOMMEND OPTION 2 (NEW RULE 12.0.1.3)

Allowing for the consideration of non-consumptive takes, where water finds its way back into the aquifer after short-term use, and takes for dewatering a site for a short term with respect to a structure, in over-allocated aquifers, is appropriate because it optimises the use of the groundwater resource in situations where no adverse impacts on the resource or other water users are anticipated, or effects are short-term and justifiable.

### 4.4 Transition: Replacing existing consents, considering past water use

Existing Policy 6.4.10AA applies when the consented volume of takes exceeds the sustainable MAL identified in Schedule 4A or, in non-Scheduled aquifers, the default of 50% MAR. It requires existing consent holders who wish to apply for a replacement consent to provide evidence of the rate, volume, timing and frequency of water taken. The policy states no minimum period for which evidence such as water metering records must be provided. For surface water the equivalent Policy 6.4.2A, requires this information to be provided for at least the preceding five years.

<b>Option 1</b>	<b>Maintain the status quo</b>
<b>BENEFITS:</b>	<ul style="list-style-type: none"><li>• No plan change required.</li></ul>
<b>COSTS/RISKS:</b>	<ul style="list-style-type: none"><li>• Existing users may be adversely affected if actual take exceeds assessed take.</li><li>• Risk of decisions being made on insufficient or inappropriate information.</li></ul>
<b>Option 2</b>	<b>Grant replacement consent for the taking of water for a volume up to the volume taken under the existing consent in the previous five years</b>
<b>BENEFITS:</b>	<ul style="list-style-type: none"><li>• Clarity around information requirements for consent applications avoids unnecessary consent processing costs for applicants</li><li>• Protects existing consent holders.</li><li>• Consistency among Plan provisions.</li><li>• Consideration of water usage over a 5-year period provides for reasonable assessment of actual water needs and facilitates good decision-making.</li></ul>
<b>COSTS/RISKS:</b>	<ul style="list-style-type: none"><li>• Plan change required.</li><li>• Slows down the progressive reduction in the allocation of over-allocated aquifers.</li><li>• Standard for information requirements may generate additional cost for applicants.</li><li>• Where an applicant can furnish only 5 years of information about past taking, it may not be enough to account for variation of taking due to typical crop cycles.</li></ul>

## RECOMMEND OPTION 2 (NEW POLICY 6.4.10A2)

When considering applications for replacement consents to take water from over-allocated aquifers, it is appropriate to allocate a volume that equals the actual volume taken under the existing consent because it better protects existing users and does not cause any further environmental impacts. Option 2 would protect existing investments.

Requiring applicants for a replacement consent to provide information on past water usage over at least the preceding five years contributes to good and consistent decision-making and provides certainty and clarity for plan users. The applicant may furnish longer term evidence.

The risk of additional costs for applicants due to the standardisation of information requirements is considered acceptable given current regulations requiring water meter records be kept.

## **5. RMA simplifying and streamlining**

The RMA was amended in 2005 to remove the requirement for plans to include matters that are not directly relevant to the regulatory material. In line with this, it is intended that plan provisions will be made more concise and self-explanatory.

### **5.1 The MAL as an environmental limit**

Under existing Policy 6.4.10A of the Water Plan the maximum allocation volume (now maximum allocation limit) is either set in Schedule 4A, or is equal to 50% of the aquifer's mean annual recharge (MAR), but when the total volume of water taken annually from an aquifer under groundwater consents exceeds the limit in Schedule 4A or 50% of MAR, then the MAL equals that total volume. In this latter transitional situation, the MAL is not a set limit, but a cap on allocation that reduces over time. It is unclear how this reducing cap works in practice.

### **5.2 Clear information on allocation status of aquifers**

The Water Plan does not provide clarity on the allocation status of individual aquifers nor does it state the relevant MAL for fully-allocated aquifers, as both may change with the granting of new consents or the cancellation, surrendering or expiry of existing ones. This status, along with any known recharge statistics can be made available on ORC's website.

Consequently, the MAL may not always be a constant value representing an environmentally sustainable limit.

Setting the MAL as either a limit in Schedule 4A or 50% of MAR is appropriate because it gives better effect to the Water Plan's objectives, and improves the clarity and simplicity of the Water Plan's provisions. It gives effect to the 2011 National Policy Statement on Freshwater Management.

### **5.3 Removal of Explanations and Principal Reasons for Adopting**

In order to streamline the Water Plan in giving effect to the Resource Management Amendment Act 2005, it is proposed to remove Explanations and Principal Reasons for Adopting from all provisions amended by this plan change. Policies will be self-explanatory and succinct. This will make the Water Plan easier to read and use, and removes potential ambiguity between policies and explanations.

As a consequence, the Glossary requires a new definition for "Registered community drinking water supply" as the explanation to this term is proposed to be deleted along with the Explanation to Policy 6.4.10AA. For certainty, the new definition can specify the statute under which registration occurs.

## 6. Consultation

Prior to notifying Proposed Plan Change 4B, discussions were held with representatives of groundwater applicants who were uncertain about the implementation of the allocation provisions. A Consultation Draft was released for comments on 30 November 2013. Comments were received by 31 January 2014 and were summarised for ORC Committee Report 2014/0692. Subsequent to the Consultation Draft comments period, meetings were held with Kai Tahu on 26 February 2014 and Federated Farmers and Irrigation NZ on 4 March 2014.

## 7. Conclusion

The purpose of the RMA is to promote the sustainable management of natural and physical resources. It is considered that each of the above recommended changes to the Water Plan will assist in clarifying the groundwater allocation provisions and improve consistency, certainty and clarity in Plan implementation.

## 8. Reference material

- *Otago Regional Council Reports:*
  - *Section 35(2)(b) Assessment of efficiency of policies, rules and other methods: Groundwater allocation. [Appendix 1 of Report 2013/0998.]*
  - *Report 2014/0692 - Notification of Proposed Plan Change 4B (Groundwater allocation)*
- *Other material:*
  - *National Policy Statement on Freshwater Management. Ministry for the Environment 2011*
  - *Proposed amendments to National Policy Statement on Freshwater Management, 2011. A discussion Document. Ministry for the Environment 2013*