Attachments – Council agenda 10 December 2014

Proposed Plan Change 4B

Proposed Plan Change 4C

OTAGO REGIONAL COUNCIL

Minutes of a meeting of the Hearing Committee for Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago held at Otago Regional Council, 70 Stafford Street, Dunedin on Tuesday 16 September 2014, starting at 10.30am

Membership:	**Cr Louise Croot** (Chairperson) **Cr Sam Neill** **Cr David Shepherd**
In Attendance:	**Manager Policy, Dale Meredith** **Senior Policy Analyst, Richard Pettinger**

RECOMMENDATIONS

Item 1
2014/1342 **Hearing of Submissions on Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago.**
DPRP, 2 September 2014

Cr Croot welcomed those people attending the hearing of submissions and further submissions relating to Proposed Plan Change 4B (Groundwater allocation) of the Regional Plan: Water for Otago.

At the commencement of the hearing, the two submissions that were lodged late were considered.

Cr Shepherd moved
Cr Neill seconded

That the Hearing Committee accept the late submissions by Oceana Gold (NZ) Ltd and the "Oil Companies" Z, BP, Mobil.

Motion carried.

Information was tabled from 7 submitters:

Submitter 5: Fonterra
Submitter 6: Federated Farmers Inc
Submitter 8: Lincoln University
Submitter 11: Irrigation New Zealand Inc
Submitter 12: Mintago Investments
Submitter 14: L & M Lignite Kaitangata Ltd
Submitter 15: 'Oil Companies' Z, BP, Mobil

Cr Croot moved
Cr Shepherd seconded

That the tabled information is received

Motion carried.

Apologies were received from Kai Tahu ki Otago Ltd and Michael Wong of Southern District Health Board.

The following submitters and further submitters presented their submissions in person, in the following order:

Submitter/ Further Submitter	Submitter	Representative
16/24	Oceana Gold (NZ) Ltd	Jackie St John Simone Creedy
9/22	Holcim (NZ) Ltd	Jackie St John
7/26	Horticulture NZ	Lynette Wharfe
1	Cardrona Ltd (Benbrae Resort)	Sarndra Turner Jamie Turner [?Young]
10/23	Contact Energy Ltd	Rosemary Dixon Daniel Druce

After the completion of presentations by these submitters, the committee adjourned to deliberate.

Further deliberations were held on Monday 29 September and Thursday 16 October 2014.

The recommendations of the Hearings Committee on Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago are attached to this report along with the full schedule of changes to the Regional Plan: Water for Otago arising from these recommendations, and the supporting Section 32AA Further Evaluation Report.

Cr Neill moved
Cr Shepherd seconded

That the Hearings Committee on Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago make its recommendations, attached, to Council.

Motion carried.

HEARING NOTES
Tues 16 September 2014 Otago Regional Council, 70 Stafford Street, Dunedin.

Start time: 10.42 am

Cr Croot welcomed those people attending the hearing of submissions and further submissions relating to Proposed Plan Change 4B (Groundwater allocation) of the Regional Plan: Water for Otago and introduced the hearing panel.

At the commencement of the hearing, the two submissions that were lodged late were considered.

Cr Shepherd moved
Cr Neill seconded

That the Hearing Committee accept the late submissions by Oceana Gold (NZ) Ltd and "Oil Companies" Z, BP, Mobil.

Motion carried.

Information was tabled from 7 submitters:

Submitter 5: Fonterra
Submitter 6: Federated Farmers Inc
Submitter 8: Lincoln University
Submitter 11: Irrigation New Zealand Inc
Submitter 12: Mintago Investments
Submitter 14: L & M Lignite Kaitangata Ltd
Submitter 15: 'Oil Companies' Z, BP, Mobil

Cr Croot
Cr Shepherd

That the tabled information is received

Motion carried.

Apologies were received from Kai Tahu ki Otago Ltd and Michael Wong of Southern District Health Board.

Start time 10.50 am
Sub 16 Oceana Gold (NZ) Ltd
Jackie St John, Simone Creedy
Submission: Spoke to submission and further submission. Presentation notes tabled [16/1, 16/2]. Gives example of how dewatering at Frasers pit works.
Questions:
LC It goes back as surface water?

SC Yes, then it is connected to ground water.

DS Do you have a number re the quantity returning to the aquifer?
SC It is not handy. I could get it back to you.
DS Your consent will require metering of the volume dewatered.
SC Yes, we measure, we need to check where water goes to the stream.
DS That is a mathematical calculation?
SC Yes.
SN The ponds overflow?
SC I'm not sure if it is pump or overflow. More water is used for dust suppression.
SN You could measure it?
SC Yes, you could do. But I have not got too close to the details.
LC All different points of measurement are possible & time consuming?
SC Yes.
LC Then you look at where it goes from there.
SC Yes.

SC [Para 24] I note there are non-consumptive features that are difficult to quantify eg evapo-transpiration, plant uptake.

DS Under para 27, for OGL, please give an example of a high value efficient use of groundwater.
SC I could give one for surface water. [Pause] De-watering of the underground operation. The amount taken is about maintaining a dry work environment; it goes for dust suppression, and to the processing plant. It should not be returned to the creek, use as priority over surface water. Also for post-mining rehab activities – but treated.

LC [Para 32] Do you have an example eg Fraser Pit – is it an example of structure maintenance?
SC I would say it is, but I'm employed by OGL. I don't know if a consent processor would see it the same way. Is the mine a construction, or structure maintenance activity? That implies fixing, or maintaining, something so that it does not deteriorate. We are making the pit larger, so that could be seen as more than maintenance of the structure.
LC I'm glad you said that. It is a structure. But de-watering maintains -
SC Ensures stability -
LC Makes it a safe place. But others could have a different view.
SC Our waste rocks stack is a structure for some building consents. It depends on what angle you are coming from.
DS Do you have an example of Rule 12.0.1.3(2) that would satisfy your needs?
JS You're about to hear it in Para 8.
LC You see taking water out for that structure as maintenance.
JS Yes, it is not 'repairing' to take water out. The suggested change from 'maintain' to 'repair' does not help us. [Para 8] What is the difference between pit construction and tailing maintenance? In para 12, if you amend the rule as suggested – that makes dewatering explicit. It would only apply to a few mines in Otago. The words "all of the water" creates difficulties. [Para 19]

Or change the activity status, and let the applicant bring information to Council on the day.
Once an activity is prohibited, you can only change with a plan change.
ORC will be well within the 2025 date for meeting the NPSFM.

LC The technology is in place?
JS To do consumptive takes? Yes. For non-consumptive takes, that is a much more difficult issue.
LC And for the phase-in period? 2 or 5 years?
JS I suggest a 5-year phase.
SC That would give a warning period. There will always be non-consumptive takes that are difficult or impossible to measure, and need a hydrologist to calculate. For small operators, I'm not sure how it would work. A 5-year lead-in would be a relief.
JS The table at rear goes through all of our submissions. These are the key matters.

DS In Paras 12 & 13, do you rank the alternatives equally?
JS I prefer 12 to 13, it is explicit; there is no room for interpretation errors. You could consider adding a mine de-watering definition. If you are happy, that covers all the activities that Simone refers to.
SC We may need to do future de-watering.
DS There is an issue re definitions and explanations, and their openness to interpretation.
LC Notes the scale in Otago.
JS Notes tabled information from L&M, which is a different operation but has similar concerns.

End Time 11.35 am

Start time 11.36 am
Sub 9 Holcim (New Zealand) Ltd
Jackie St John

Submission: Spoke to submission and further submission. Presentation notes tabled [9/1]. [Para 2.2] Holcim will face some difficulty renewing its consent.

Questions:
LC This is hypothetical; they have till 2016 to start. So no-one can use that water. How long are those consents for?
JS They were granted in 2009, I don't have that detail.
LC Is this holding water?
JS Do you mean land banking?
LC Yes, it does happen. I'm not sure how far in the future you can look.
SN They could be halting some other applicant.
JS It could be. We know what we have consent for is sustainable. We don't know what is proposed.
SN The logic of the 5-year take & logic for someone else to use -
JS Should just be one factor. If there was another proposal, without the same efficiencies, you'd miss out.
LC I'm trying to put this in the larger context.

JS	Land banking is not intended. This would apply in extremely limited circumstances.
DS	OGL requested a shorter time for take information. Holcim wouldn't want it shortened?
JS	No. But it wouldn't make any difference, Holcim can't supply 2 or 5 years info.

End Time 11.55 am

Start time 11.56 am
Sub 7 Horticulture NZ
Lynette Wharfe

Submission: Spoke to submission and further submission. Presentation notes tabled [7/1]. An apology was given from Chris Keenan. We think the implications are greater than what appears through the Officers' Report. We assume non-consumptives takes are in the Policy 6.4.10A volume available for taking.

Questions:

LC	What alternative would you suggest?
LW	We want a significant alternative set out for the policy and Schedule 4D, based on a water-balance model. The science changes all the time. Use of Irricalc and a water balance model is more how we would like to go, as Irrigation NZ suggested.
LW	[page 5] Method 15.8.3.1 doesn't work well for horticulture. You need to do some calculations; then ground truth the method.
DS	What does ground truthing technically mean?
LW	Go out with some users, test converting their consent to an annual volume, get as assessed volume – then check on the ground what is happening, how accurate is this? Are the calculations valid for a particular user?
LC	Their consents would all have limits on them. You want to prove what is coming out of the aquifer.
LW	Not all consents have an annual volume, if it is not expressed as an annual volume, they have to be converted using Method 15.8.3.1. There is considerable error potential, as a small error can extrapolate to a large error. So ground truthing is needed for accuracy. If they were accurate, we would be much happier with the use of the methodology.
DS	All takes now need monitoring. Does metering of all takes give comfort?
LW	So why have a method to convert a consented volume to an annual volume?
DS	It is for some of the older takes.
LW	Until all are reviewed and given annual volume, this is an interim assessment. It is important for the maximum allocation limit. If annual volumes are distorted, there is a flow on for the maximum allocation limit.
LC	Is this always an exact science?
LW	No, it's not. But we want to get it as accurate as we can,
LC	We have those issues in North Otago. Where there are deemed permits, which lead to uncertainty.

LW	Several things demand investment. Getting aquifers into Schedule 4A would give more certainty.
LC	That is happening. It involves ratepayer money.
LW	We would like as many in 4A, outside of RMA…
LC	Through the RMA?
LW	Make the money available to do it through the annual plan.
DS	Rules require efficiency
LW	That is not in the policy. Considerations under matters of discretions do not cover this. You are looking at taking only over the past 5 years. If applying the King Salmon case, you are tied to the policy. The policy over-rides the matters of discretion. What is the relationship between policy and rules with matters of discretion? Put it in the policy.
LC	[para 3.1, page 10] Why 10 years?
LW	Length of crop rotation: It could be at least 10 years, over a longer length of time. You need to take into account particular factors, including efficiency of use, and putting it in the policy.
SN	So use the take which is the highest of 10 years? Not the average? That could result in some under-allocation, water being unused.
LW	If a vegetable grower, e.g. lettuces need a lot, you could be short changed in the highest year. Taking the average means a grower is disadvantaged in the years with the highest need.
LC	Do they have storage?
LW	We seek the highest time; it is for you to debate. It is also in Fonterra's evidence.
DS	And we must account for rainfall.
LW	There may be wet and dry years.
LW	The non-complying activity status will be a significant hurdle, given policies in the plan. At least there is an opportunity to present technical data to base an assessment on. I have also read the evidence of Irrigation NZ, Fed Farmers.

End Time 12.35 pm

Adjourned 12.35pm.

Reconvened 1.30 pm

Start time 10.30am
Sub 1 Cardrona Ltd (Benbrae Resort)
Sarndra Turner, Jamie Young

Submission: ST Spoke to submission. Submission is based on our consent allocation, 77 cumecs per day, till 2031. We haven't been taking that amount. The units are rented out as tourist accommodation. Now people are living in those units. We have a lot of undeveloped land, it was consented, but we let the consent lapse. There are 12 x 2-bedroom units and more to come, on 15 ha. Development was stopped as there was a lull in the market. Our concern, if it does proceed and

water allocation changes, is that we cannot say we are set to go to develop, with changes of occupancy, and 44 different owners. We supply the water. Need security. If occupants all become residents, they will need more water than is currently used. Now it is 30% occupied, and 3 units with fulltime residents,

Questions:

LC	Is that a trend?
ST	Yes, they're interested in if can I live here, operate business etc. If our water drops we can't provide for all.
JY	We pump water to above the sites.
LC	You may need consent variation.
ST	To 2031, 77 cumecs. If we were to be dropped to current use, we wouldn't have enough.
LC	In 2031?
ST	Yes.
LC	Are you supplying a community water scheme?
JY	We are under that regulation.
LC	That's a potable supply
JY	ORC and Public Health South regulate us.
LC	Is there a concern about quantity?
ST	And the way it could be adjusted. It's such a long way away. We're OK if it stays the same.
JY	If it is based on this take, we could be disadvantaged.
LC	How long have you been there?
JY	8 years.
DS	Is the consent based on completed development?
ST	The whole thing can be developed. It is based on the development intention.
SN	What about the allowance for reasonably anticipated growth?
ST	You need to make sure it is interpreted consistently.
JY	Our concern is there are different interpretations.
LC	[To staff] Please clarify.
RP	Registration covers 25 houses or more. It is up to them to apply for registration as a community drinking water supply.
SN	So it could be registered as a community water supply?
RP	The Health Act is intended to cover that situation.
LC	I'm not sure if that reassures you.
ST	Yes.
LC	You had questions re community growth. People water has priority, stock, fire fighting.
LC	Are your concerns from ORC or elsewhere?
JY	Some is from ORC, some is from the community. The policies may change from time to time.
LC	So now there is a time of change. I hope this reassures you. Classification as a community scheme, consideration against wastewater needs.
DS	If development continues, the need will be shown.
LC	The proposed plan has 5 year/2 year options.

End Time 1.40 pm

Start time **1.41 pm**
Sub 10 **Contact Energy Ltd**
Rosemary Dixon, Daniel Druce

Submission: Spoke to submission and further submission. Presentation notes tabled [10/1-4].

RD Supports retention of Rule 12.0.1.3 prohibitions, these meet NPSFM, this is the most straightforward way to meet those requirements.
Method 15.8.3.1 relates to how the policies work e.g. Policy 6.4.10A(1). The policy tweaks requested may make the whole policy framework unworkable – diluted. You need a clear definition of consumptive and non-consumptive.
Notes that the Oil Companies have picked up on definition issue for consumption in their tabled evidence.

[Paras 14-22] Sets up the need for an inquiry into the nature of which parts of consents are consumptive, and which are non-consumptive. Existing consent holders may have wanted to be involved if they thought this was a possible direction.
Interaction of groundwater, surface water and hydro-generation are interlinked.

Para 26 sets out the test for consumptiveness – is the same amount of water, returned back to same water body, with no delay.

The panel is alerted to a document that arrived yesterday from MfE / NIWA giving guidance on how to account for freshwater to accord with NPSFM 2014 – it is going out for consultation. I will alert this to you. It has quite a discussion on this matter, reflecting the straight up and down approach of the water metering regulations. It also talks of consumptive use e.g. irrigation. Also, there is always some level of return, but you need a straightforward distinction.

Questions:

DS What is the document name?

RD Guidance from NIWA, a Freshwater Accounting System. And it is going out for consultation.

LC Date?

RD July 2014.

RD [Para 28] No council has attempted to do case-by-case analysis; it is too complex, it creates uncertainty and leads to an argument for any resource consent coming before you. There is a real risk it undermines the principle of how to address over-allocation. The policy may become unfit for purpose, because of the way the method interacts with it. There are implications for the policy regime.

[Para 29] This increases cost to Council.

DS [Para 22] – Are you questioning the validity of their submissions, further submissions, or what has been presented today?

RD Primarily their lodged submission. I don't think they've picked up on this in their tabled evidence.

DD I spoke to Ian McIndoe [refer to tabled item 10/2] about 2 weeks ago, and asked for a practical paper re consumptive/non-consumptive for irrigation takes. It is site specific, not easy to do, and the onus is on the applicant.

RD Contact would accept this aspect of the plan change as notified, but not the Officers' Report recommendation to change it.

DD If you want us to develop any of Ian McIndoe's points, we will.

End Time 2.16 pm

Hearing ends 2.16 pm

Adjourned at 2.17 pm.

The Hearing Committee reconvened for further deliberations on Monday 29 September at 9 am, and Thursday 16 October 2014, commencing at 10 am.

Cr Neill moved
Cr Shepherd seconded

That the Hearings Committee on Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago make its recommendations, attached, to Council.

Motion carried.

Attachment 2

Proposed Plan Change 4B (Groundwater allocation)

to the Regional Plan: Water for Otago

Recommendations of the Hearing Committee to Council

Otago Regional Council

27 November 2014

This report presents the recommendations of the Hearing Committee to the Otago Regional Council on submissions and further submissions to Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago.

Hearings Committee:

Councillor Louise Croot M.N.Z.M.

Chairperson

Councillor David Shepherd

Councillor Sam Neill

Abbreviations

MAL	Maximum Allocation Limit (previously Maximum Allocation Volume (MAV))
MAR	Mean annual recharge
NPSFM	National Policy Statement for Freshwater Management 2014
ORC	Otago Regional Council
Proposed plan change / plan change	Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago
RMA	Resource Management Act 1991
Section 32 Evaluation Report	The evaluation report assessing alternatives, benefits and costs for proposed plan change 4B to the Water Plan as required by Section 32 of the RMA
Section 32AA Further Evaluation Report	The further evaluation report amending the Section 32 Evaluation, as required by Section 32AA of the RMA
SOE	State of the Environment (monitoring undertaken in accordance with Section 35(2) RMA)
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.

Note: text marking

~~Operative word~~ / notified word	Notified change, showing change proposed from the Water Plan
~~Notified word~~ / amended word	Amendment recommended in this report

Background

Proposed Plan Change 4B (Groundwater allocation) to the Water Plan clarifies the controls in the 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.

Plan Change 4B was publicly notified in the Otago Daily Times on Saturday 17 May 2014 and submissions closed on Tuesday 17 June 2014. A total of 16 submissions were received, two of which were received late.

The *Summary of Decisions Requested* with the request for further submissions was notified on Saturday 28 June 2014, with further submissions closing on Friday 11 July 2011. There were 8 further submissions received.

The *Officer's Report on Decisions Requested* which evaluated decisions requested by submitters and further submitters and made recommendations to the Hearing Committee was released on 29 August 2014.

We heard submissions on the proposed plan change on Tuesday 16 September 2014 in Dunedin. Five submitters spoke to their submissions and we considered tabled evidence from six submitters who were absent.

The main matters raised by submitters on Plan Change 4B broadly related to:

- General support for the clarification objectives of the Plan Change; given some minor modifications for greater clarity;
- Requests that the prohibited activity to avoid over-allocation be replaced by a consenting option when an aquifer has not been investigated for inclusion in Schedule 4A's maximum allocation limits (formerly 'volumes'); and
- Concerns about determining mean annual recharge of an aquifer, and the consumptiveness of a take, if provisions based on prohibition remain unchanged.

We thank all of the people who have participated in this plan change process. We have read all submissions and listened to evidence presented at the hearing. In preparing our recommendations we have also been mindful of the Otago Regional Council's statutory responsibilities under the Resource Management Act 1991 (RMA), the National Policy Statement on Freshwater Management 2014 (NPSFM).

As a result of the submission and hearing process, our recommendation to the Otago Regional Council is to adopt the plan change as proposed, with the following recommended amendments.

Our recommendations follow.

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CHAPTER 1 – A LIMIT ON GROUNDWATER ALLOCATION

The notified changes to the Water Plan sought to clarify the controls in the Water Plan for avoiding over-allocation of groundwater in Otago, while retaining the established principles of groundwater allocation.

1.1 Limiting total annual groundwater allocation

Policies 6.4.10A, 6.4.10A1, Rule 12.0.1.3, Method 15.8.3.1, Schedule 4D, Definitions
Plan Change 4B pages 2-3, 8, 12-13,16,18
Summary of Decisions Requested: pages 11–30, 36-387

The notified plan change proposed to amend Policy 6.4.10A, which set up the groundwater allocation framework, by establishing the concept of what is now termed the maximum allocation limit (MAL). This gives an annual volume for sustainable taking, consistent with the NPSFM. If water is already allocated to consents, any quantity remaining available is the MAL less what is currently estimated to be the assessed maximum annual take. Method 15.8.3.1 is used to estimate this aggregated quantity being taken under consents.

Where MAL for a specific aquifer has been determined through a RMA Schedule 1 process, it is shown in Plan Schedule 4A. A default MAL can be determined on a case-by-case basis as 50% of the mean annual recharge (MAR). MAR is estimated by a calculation guided by the factors in Plan Schedule 4D. Once MAR is calculated, the default MAL is a fixed quantity used for determining consents. It may change when a MAL is specified in Schedule 4A, through a subsequent plan change process.

Most submitters supported the overall objective of sustainable allocation and use of Otago groundwater. The following are the main issues raised:

- Allocation status should be available on-line and should make clear what quantity is available, as opposed to the total that can be allocated.
- Allocation should be based on demand, considering location, soils and the nature of the activity, rather than on the aquifer's supply, and take account of permitted activity takes, avoiding over-estimating actual takes, and the method used for quantity estimation to be confirmed through ground-truthing.
- The Plan should express how over-allocation will be managed through phased reduction to MAL.
- Delay policies coming into effect while consent holders measure water usage and collect data including measuring consumptive and non-consumptive aspects of take.
- Abandon the plan change until ORC knows Otago aquifers thoroughly.

1.1.1 Recommendations

We considered the submissions and recommend the following:

Amend Note box in 12.0 as shown below

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

1.1.2 Reasons

- Clarifying groundwater availability and permitted takes

There is no need to further amend these policies because the heading "Groundwater Takes" before Policy 6.4.10A means this section cannot relate to anything but the *groundwater* in an aquifer. If there is any water currently allocated to consents, that will be deducted to quantify how much remains available.

The quantity of water available in an aquifer is a matter of physical supply, not a matter of demand.

Takes with no more than minor effect are permitted under Rules in 12.2.2, and information about the quantity taken is not provided to ORC. Permitted activity takes are not included in the calculation of take volumes under consents.

- Making the aquifer status available on-line

Publicly-available on-line data on aquifer status can be revisited periodically as investigation and calculations become more thorough or sophisticated.

- Calculating aquifer allocation limits, using the interim Method 15.8.3.1

Method 15.8.3.1 is designed to calculate a maximum annual consented allocation volume for an aquifer until all consents stipulate a maximum annual take volume. It represents the potential annual maximum volume taken by all consents, and is not an estimate of actual water use which needs "ground-truthing". Consented take volume is the starting point because it could potentially all be used, for example if the consent allows for transfer of location of use, or land use activity changes to greater reliance on irrigation. In the short term, difficulty in renewing a consent may occur because of over-estimation using this method, but this will be rectified once all consents have a maximum annual take stipulated. The NPSFM requires decisions not be made that allows total take to exceed allocation limits.

- Volume of water taken historically

This is dealt with more fully in section 3.1.

A distinction needs to be made between an aquifer's allocation limit and the limits on a consent.

All of the matters listed in Rule 12.2.3.4 are used to determine a consent for a new or re-consented take, and in setting appropriate conditions. Volume of water taken historically is just one consideration, requiring a formal policy direction on which to base consent decisions. The National Environmental Standard on Ecological Flows and Water Levels will provide data on takes where no such requirement is within current consent conditions.

- A potential new policy for reducing taking to the maximum allocation limit

The Plan provides the mechanisms of consent surrender, expiry, cancellation or lapse, with no further allocation until taking is under the limit again; reduction to that actually used historically (*notified as* Policy 6.4.10A2, *now* 6.4.10A4); takes cannot exceed quantity required for the purpose of use (Policy 6.4.0A). This policy framework has been in place for over ten years. In any plan change introducing a new MAL to Schedule 4A, the extent of any over-allocation in the particular aquifer will be considered, as set out in Schedule 4C.

- Timely action to avoid or address over-allocation

No water source should be adversely affected while consent holders carry out legally-required measurement of takes.

A programme of adding the MAL for aquifers to the Water Plan should continue if required and as sufficient information is obtained to validate the work.

Any delay in implementing this plan change would not meet NPSFM requirements.

1.2 New consents – consumptiveness of takes

Rule 12.0.1.3, Method 15.8.3.1
Plan Change 4B page 8, 12-13
Summary of Decisions Requested: pages 16-21, 25-30

Consumptiveness is a measure of the degree to which water use results in a net loss of water from a source water body.

The following is the main issue raised, regarding how Rule 12.0.1.3 addresses the degree of consumptiveness of a take from an aquifer:

- Allocation status should exclude non-consumptive taking, temporary dewatering, and any quantity which returns water to the aquifer.

1.2.1 Recommendations

We considered the submissions and recommend the following:

(a) Amend Rule 12.0.1.3 as shown below

> (2) Is taken for temporary dewatering at a site for ~~to allow a~~ construction or repair of a structure ~~maintenance activity~~.

(b) Amend Method 15.8.3.1 as shown below

(c) less any quantity <u>specified</u> in a consent <u>as non-consumptive</u> ~~where all of the water taken is~~ ~~immediately~~ ~~returned to the aquifer or connected surface water body~~.

(c) Adopt a new definition in the Glossary as shown below

<u>Non-consumptive take</u>[+]	<u>A take is non-consumptive when:</u> <u>(1) The same amount of water is returned to the same water body at or near the location from which it was taken; and</u> <u>(2) There is no significant delay between the taking and the returning of the water.</u> <u>[+] as defined in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010</u>

1.2.2 Reasons

- Managing consumptive and non-consumptive takes; return flow

Non-consumptive takes are excluded from aquifer allocation by Policy 6.4.10A1 as notified (*now* Policy 6.4.10A3 as recommended in section 2.1.1(d) below), and by Method 15.8.3.1. A definition on Non-consumptive take is useful for clarity, and ensures accepted usage in the 2010 measurement and reporting regulations is followed.

Non-consumptive uses of water, or temporary takes, cannot deplete the volume available for annual allocation. Depletion of an aquifer's annual volume is not sustainable, although short-term fluctuations may be acceptable, where a restriction level is in place and is not breached.

Takes associated with structure repair work are expected to result in no significant net loss of water to the aquifer, so it is appropriate to excluded them in Rule 12.0.1.3(2).

Consumptiveness will be examined through case-by-case consideration of applications, where the applicant can demonstrate non-consumptiveness, and the duration of temporary effects. Degree of consumptiveness will be investigated to ensure that no user or value reliant on the groundwater levels in an aquifer is affected by the take. This therefore needs to be reflected under (c) in Method 15.8.3.1 regarding return of water to an aquifer. With respect to Schedule 4D, ORC in calculating MAR will include consideration of efficient irrigation return flows where they are known with sufficient certainty.

CHAPTER 2 – CONSENTS IN OVER-ALLOCATED AQUIFERS

2.1 Prohibiting unsustainable taking

Rule 12.0.1.3, Rules in 12.2
Plan Change 4B pages 8-9
Summary of Decisions Requested: pages 24-30

While several submitters supported the need to avoid new or further over-allocation situations, some submitters sought:

- A resource consent option to allow consideration of a take that could go beyond the allocation limit for an aquifer, e.g. when there is doubt over the degree of consumptiveness of a take.
- A policy on phased reduction to MAL in over-allocated aquifers, with extra matters of discretion added to Rule 12.2.3.4 to allow consideration of: the volume taken in the last 5 years; effects of take on surface flows; any Schedule 4A MAL.

2.1.1 Recommendations

We considered the submissions and recommend the following:

(a) Amend Rule 12.0.1.3, as shown below:

12.0.1.3 ~~An~~ The application to take groundwater for a consumptive use ~~within the maximum allocation volume in an aquifer where Policy 6.4.10A(a)(i)(2) or (a)(ii)(2) applies,~~ by a person who does not hold the existing resource consent to take that water, from an aquifer identified in Schedule 4A where the assessed maximum annual take:

(i) Exceeds the aquifer's maximum allocation limit; or

(ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a ***prohibited*** activity~~.~~, unless all of the water taken:

(1) Is allocated as surface water under Policy 6.4.1A; or

(2) Is taken for temporary dewatering at a site for ~~to allow a~~ construction or repair of a structure ~~maintenance activity~~.

(b) Add new Rule 12.2.1A.3, as shown below:

12.2.1A.3 The taking of groundwater for a consumptive use by a person who does not hold the existing resource consent to take that water, from an aquifer not identified in Schedule 4A, where the assessed maximum annual take:

(i) Exceeds the aquifer's maximum allocation limit; or

(ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a ***non-complying*** activity, unless all of the water taken:

(1) Is allocated as surface water under Policy 6.4.1A; or

(2) Is taken for temporary dewatering at a site for construction of a structure or repair of that structure.

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

(c) Amend Rule 12.2.3.2A to begin: "Except as provided for by 12.0.1.3, 12.2.1A.3 and 12.2.3.1A, the…

(d) Amend Policy 6.4.10A1 and add new Policy 6.4.10A3, as shown below:

6.4.10A1 Define the maximum allocation limit for an aquifer as:

(a) That specified in Schedule 4A; or

(b) For aquifers not in Schedule 4A, 50% of the mean annual recharge calculated under Schedule 4D;

~~**and, beyond that maximum, avoid allocating for a consumptive use any water not previously taken under a resource consent.**~~

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

(a) Is for a non-consumptive take; or

(b) Has been previously taken under a resource consent; or.

(c) Is for a new, consumptive take of a temporary nature that is necessary for construction or repair of a structure.

2.1.2 Reasons

- Prohibit taking from an aquifer that is or would become over-allocated, where the aquifer has been included in Schedule 4A.

It would be inconsistent with the NPSFM to grant taking which is not sustainable. The ORC would not grant an application for a take that would reduce the annual volume of an aquifer, so there is little point applying for, or considering one, and the prohibited activity status sends a clear message to the community that over-allocation will not be perpetuated.

- Make taking from an aquifer that is or would become over-allocated, where the aquifer has not been included in Schedule 4A, subject to a resource consent application as a non-complying activity.

While it would be inconsistent with the NPSFM to grant taking which is not sustainable, a policy approach to allow fuller investigation of the allocation status of an aquifer is appropriate. Avoiding prohibition on applications, where an aquifer has not been investigated and included on Schedule 4A allows closer examination of recharge characteristics. Policies to avoid consumptive takes which have more than minor effects or are not temporary are also appropriate. To give effect to the NPSFM, the ORC could not grant an application for a take that may reduce the annual volume of an aquifer.

- Non-consumptive takes

An application to take that is totally non-consumptive can be considered. In considering the degree of consumptiveness, some minor losses such as through evaporation may be considered insignificant. The definition of "Non-consumptive take" recommended for inclusion in section 1.2.1(c) above is added for clarity and consistency with regulations on take measurement.

- Sampling or other investigation wells, pits and bores

Bores, under the Plan definition, do not include sampling bores or piezometers, and small takes are permitted by Rule 12.2.2.

- Phased reduction of over-allocation

The Plan provides the mechanisms of consent surrender, expiry, cancellation or lapse, with no further allocation until taking is under the limit again; reduction to that actually used historically (Policy 6.4.10A2 *now* 6.4.10A4); takes cannot exceed quantity required for the purpose of use (Policy 6.4.0A). This policy framework has been in place for over ten years. In any plan change introducing a new MAL to Schedule 4A, the extent of any over-allocation in the particular aquifer will be considered, as set out in Schedule 4C.

The matters of discretion in Rule 12.2.3.4 cover matters for which imposition of a consent condition may need to be considered.

A future plan change is likely to consider a more explicit policy in order to give effect to the NPSFM.

2.2 Replacement consents

Policy 6.4.10A2
Plan Change 4B pages 4-5
Summary of Decisions Requested: pages 30-36, 38

While several submitters supported the need to limit taking under replacement consents, some submitters sought:

- Reconsideration of reliance on historical use over at least the preceding five years.

- Consideration of the needs of private residential development with expansion plans, or those who can justify being granted a higher volume.
- Allowance for consents to be renewed and extended.
- Consideration of the highest actual uses in the past 10 years.
- Reduction to 2 years of record as 5 years is an onerous information requirement.
- Other considerations be used when determining re-consented amount.
- Different measures be used to assess how much water is appropriate to grant.
- An equitable cut-back for all permit holders.

2.1.1 Recommendations

We considered the submissions and recommend no amendment to Policy 6.4.10A2 as notified (*now* 6.4.10A4).

2.1.2 Reasons

- Reasonably anticipated growth

Increase in actual taking within reasonably anticipated growth can be described in an application for consent replacement, and considered. Residential development may be able to qualify for registration as a community drinking water supply, if the supply serves a community of more than 25 people for more than 60 days a year.

- Wet or dry seasons, realistic requirements

If there have been no very wet or very dry years in the 5 years, an applicant can always furnish evidence from a longer period of typical usage, to make their case. The ORC will have records of wet or dry years. Users who can demonstrate best industry practice efficiency in a typical dry season may be in a strong position to justify applying for water volumes considered necessary for their activity.

The Policy is about considering evidence of need for water (including information about climate, soil and crops), not about a potential requirement for water (which is dealt with in justifying a take application).

Two years of evidence may not be enough to give a realistic picture of typical taking. It is up to the applicant to provide sufficient evidence to justify an application. The National Environmental Standard on Ecological Flows and Water Levels will ensure take data is collected and provided.

- Consistent implementation of groundwater taking provisions

Replacement consents to take need consistent treatment. Increases to existing taking under current consented takes may adversely affect values and uses of aquifers that are fully- or over-allocated. Consents in other aquifers can be renewed and extended, if justified. Policies such as 6.4.10A2 (*now* 6.4.10A4) follow basic principles that have

been established for some years and remain the foundation for the consistent implementation of the Water Plan.

- Equitable treatment of applicants

All applicants for replacement consents in an over-allocated aquifer will be treated equitably, as the same considerations will be applied and each, over time, will eventually be subjected to the same need to justify their application.

- Matters of discretion

All of the matters listed in Rule 12.2.3.4 are used to determine a consent for a new or re-consented take, and in setting appropriate conditions. Volume of water taken historically is just one consideration, but it requires the direction of Policy 6.4.10A2 on which to base consent decisions.

CHAPTER 3 – RECOMMENDATIONS ON OTHER PLAN CHANGE MATTERS

3.1 Policy 6.4.10A3 (*now* 6.4.10A5)

Policy 6.4.10A3
Plan Change 4B page 5
Summary of Decisions Requested: pages 23-24

This provision provides policy guidance on other matters relating to groundwater consenting. Some submitters sought:

- The need for Policy 6.4.10A3 to clearly relate to groundwater takes only.

3.1.1 Recommendations

We considered the submissions and recommend amending Policy 6.4.10A3 (*now* 6.4.10A5) as shown below

> **6.4.10A~~3~~5** *[Moved from Policy 6.4.10A(c) and (d)]* **In managing the taking of groundwater, a~~A~~void in any aquifer:**
>
> **(a) Contamination of groundwater or surface water; and**
>
> **(b) Permanent aquifer compaction.**

3.1.2 Reasons

- Policy 6.4.10A3 (*now* 6.4.10A5) sits in the Groundwater Takes section, but for certainty the words that headed former Policy 6.4.10A can be reinstated.

3.2 Simplification and streamlining

Removal of explanations and Principal reasons
Plan Change 4B page 3-5, 8
Summary of Decisions Requested: page 36

A submission requested the retention of explanations and principal reasons for adopting due to the helpful information and useful context they provide.

3.2.1 Recommendations

We considered the submission and recommend deletion of the specified explanations and principal reasons for adopting.

3.2.2 Reasons

- The deletion of these provisions simplifies the Water Plan. Only objectives, policies and rules are required in a regional plan; explanations are optional. Provisions need to be able to be read without the need for explanation. The ORC continues to produce a range of supporting documents, including the SOE reports, brochures and guidelines on using the Water Plan, and website material.

3.3 Minor and consequential amendments

Table of minor and consequential amendments
Plan Change 4B pages 19-20
Summary of Decisions Requested: page 37

The plan change proposes a number of minor and consequential changes. A submission sought changes consequential to the decisions requested.

3.3.1 Recommendations

We considered the submissions and recommend adoption of minor and consequential changes as notified.

3.3.2 Reasons

- Clause 10(2) of Schedule 1 RMA provides for any necessary consequential alterations.

CHAPTER 4 – MATTERS NOT ADDRESSED IN THIS PLAN CHANGE

4.1 Matter beyond the scope of the plan change

Summary of Decisions Requested: page 16

One submitter requested an aquifer in the Middlemarch area be identified through this Plan Change and that it be a groundwater protection zone.

3.1.1 Recommendations

We considered the submissions and recommend making no amendment to address matters beyond the scope of this plan change

3.1.2 Reasons

- This plan change did not undertake a comprehensive evaluation of the need for groundwater protection zones, and land use controls are not relevant to groundwater allocation. The matter of protecting groundwater quality from leachate has been addressed through Plan Change 6A (Water Quality) and any aquifer-specific water quality issues would need to be managed through a separate plan change.

Attachment 2, Appendix 1

Proposed Plan Change 4B (Groundwater allocation)

Regional Plan: Water for Otago

Incorporating Hearing Committee Recommendations on Decisions Requested

Note: Changes shown in this document compare all recommended changes to the Operative Water Plan, with additions underlined and deletions ~~struckout~~

Otago Regional Council

27 November 2014

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* Regional Plan: Water for Otago operative as at 1 May 2014.

6

Water Quantity

6.1 to 6.3 *[Unchanged]*

6.4 Policies applying to the management of the taking of water

6.4.0 to 6.4.10 *[Unchanged]*

Groundwater Takes

~~**6.4.10A To enable the taking of groundwater by:**~~

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

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

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

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

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

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

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

~~**(D) The consent has lapsed;**~~

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

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

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

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

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

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

~~**(D) The consent has lapsed; and**~~

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

(c) In any aquifer, avoiding contamination of groundwater or surface water; and

(d) In any aquifer, avoiding permanent aquifer compaction.

Explanation

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

Sustainable allocation of groundwater will be achieved by considering as restricted discretionary activities, those applications where:

(i) The individual take would not cause the cumulative take from the aquifer to exceed 50% of the mean annual recharge of the aquifer, or the maximum allocation volume listed in Schedule 4A, unless that take was the subject of a resource consent granted before 10 April 2010; and

(ii) Relevant aquifer restriction levels are met; and

(iii) Aquifer contamination or compaction will be avoided.

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

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

When an existing consent holder applies for a new consent for the same activity, and is able to continue to lawfully exercise the consent under Section 124, that quantity of water retains its status within maximum allocation volume and may be granted to the new consent. Only where the application is approved does the quantity remain within maximum allocation volume.

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

When the aquifer levels specified in Schedule 4B are reached, the actual taking of water will be restricted as provided for in the Schedule. Restrictions will apply to

all consents to take groundwater under Policy 6.4.1A(c) or (d), including those for community water supply specified in Schedule 3B, as well as permitted taking in accordance with Rule 12.2.2.2. Maps D1–D4 show the Schedule 4B aquifers to which the restrictions apply.

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

Principal reasons for adopting

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

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

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

6.4.10AA Where an application is received to take groundwater within the maximum allocation volume and Policy 6.4.10A(a)(i)(2) or (a)(ii)(2) applies to the aquifer, to grant no more water than has been taken under the existing consent, except in the case of a registered community drinking water supply where an allowance may be made for growth that is reasonably anticipated.

Explanation

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

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

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

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

Evidence of the rate, volume, timing and frequency of water taken under the existing consent is required, such as metering or measuring data. Where there is limited or no such data available, any relevant supporting evidence may be presented, for example a description of existing circumstances and use.

~~Infrastructure present or photography showing irrigated land may also indicate how much water has been taken and when.~~

~~**Principal reasons for adopting**~~

~~This policy is adopted to assist in the reduction of the maximum allocation volume under Policies 6.4.10A(a)(i)(2) or 6.4.10A(a)(ii)(2) to reflect the amount of water actually being taken. This policy also intends that the taking of groundwater is not constrained by resource consent holders who are underutilising the groundwater allocated to them, improving efficiency of water resource use.~~

6.4.10A1 Enable the taking of water allocated as groundwater by Policy 6.4.1A, by:

(a) Determining the volume available for taking as the maximum allocation limit less the assessed maximum annual take for an aquifer calculated using Method 15.8.3.1; and

(b) Applying aquifer restriction levels where specified in Schedule 4B.

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

(a) That specified in Schedule 4A; or

(b) For aquifers not in Schedule 4A, 50% of the mean annual recharge calculated under Schedule 4D.

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

(a) Is for a non-consumptive take; or

(b) Has been previously taken under a resource consent; or

(c) Is for a new, consumptive take of a temporary nature that is necessary for construction or repair of a structure.

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

(a) The take is from an aquifer where the assessed maximum annual take exceeds its maximum allocation limit; or

(b) The take results in the assessed maximum annual take of an aquifer exceeding its maximum allocation limit,

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

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

(a) Contamination of groundwater or surface water; and

(b) Permanent aquifer compaction.

6.4.10AB to 6.7.8 *[Unchanged]*

12

Rules: Water Take, Use and Management

12.0 Applications for taking water

12.0.1 Prohibited activity: No resource consent will be granted

12.0.1.1 *[unchanged]*

12.0.1.2 *[unchanged]*

12.0.1.3 ~~An~~ The application to take groundwater for a consumptive use ~~within the maximum allocation volume in an aquifer where Policy 6.4.10A(a)(i)(2) or (a)(ii)(2) applies,~~ by a person who does not hold the existing resource consent to take that water, from an aquifer identified in Schedule 4A, where the assessed maximum annual take:

(i) Exceeds the aquifer's maximum allocation limit; or

(ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a ***prohibited*** activity~~.~~, unless all of the water taken:

(1) Is allocated as surface water under Policy 6.4.1A; or

(2) Is taken for temporary dewatering at a site for construction or repair of a structure.

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

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

~~**Principal reasons for adopting**~~

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

12.1 to 12.2.1A.2 *[unchanged]*

12.2.1A.3 The taking of groundwater for a consumptive use by a person who does not hold the existing resource consent to take that water, from

an aquifer not identified in Schedule 4A, where the assessed maximum annual take:

(i) Exceeds the aquifer's maximum allocation limit; or

(ii) Would exceed the aquifer's maximum allocation limit as a result of this take,

is a ***non-complying*** activity, unless all of the water taken:

(1) Is allocated as surface water under Policy 6.4.1A; or

(2) Is taken for temporary dewatering at a site for construction or repair of a structure.

The Otago Regional Council will use its website www.orc.govt.nz to notify an up-to-date allocation status for aquifers, showing how current allocation compares to the scheduled or default maximum allocation limit (MAL) and will, upon request, advise the applicant of the aquifer's current allocation status before any application is made.

12.2.2 to 12.2.3.1A *[unchanged]*

12.2.3.2A Except as provided for by 12.0.1.3, 12.2.1A.3 and 12.2.3.1A, the taking and use of groundwater is a ***restricted discretionary*** activity, if:

(a) The volume sought is within:

(i) The maximum allocation ~~volume~~ limit identified in Schedule 4A; or

(ii) 50% of the ~~calculated~~ mean annual recharge calculated under Schedule 4D, for any aquifer not ~~specified~~ identified in Schedule 4A; or

(iii) That volume specified ~~on~~ in an existing resource consent ~~granted before 10 April 2010, or the take applied for is a volume equal to or less than that on the existing consent~~ where the assessed maximum annual take of the aquifer exceeds its maximum allocation limit; and

(b) It is subject to any aquifer restriction level~~s~~ identified in Schedule 4B; and

(c) Where the rate of surface water depletion is greater than 5 l/s, as calculated using Schedule 5A:

(i) Primary surface water allocation is available; and

(ii) For the Waitaki catchment, allocation to activities set out in Table 12.1.4.2 is available.

The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.2.3.4.

…

12.2.3.4 Restricted discretionary activity considerations

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

(i) The maximum allocation ~~volume~~ limit for the aquifer; and

(iA) The assessed maximum annual take for the aquifer; and

(ii) The mean annual recharge of ~~that~~ the aquifer; and

(iii) The effect of the take on the hydrodynamic properties of the aquifer and the vulnerability of the aquifer to compaction; and

…

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Methods other than Rules

15.1 to 15.8.2.2 *[unchanged]*

15.8.3 Methodology for calculating assessed maximum annual take for groundwater

15.8.3.1 The assessed maximum annual take of groundwater from any aquifer for the purposes of Policy 6.4.10A1(a), will be the sum of:

(a) The annual volume specified on consents to take groundwater from that aquifer; and

(b) Where a consent does not specify an annual volume, it is calculated using the instantaneous, daily, weekly or monthly limits specified as shown below:

(i) ~~Except as provided for by (iii) below, w~~Where the purpose of use includes irrigation, convert the consent limit as follows:

(1) Where a daily or a monthly limit is specified:

Consent Limit	Purpose of use irrigation
Daily	Multiply by 90
Monthly	Multiply by 6

Note: A 90 day limit is equivalent to irrigating 150 days at 60% of the maximum take rate. A 6 month limit is representative of an annual irrigation season.

Where both limits are specified, use the limit which yields the smaller volume.

(2) Where no daily or monthly limit is specified:

Consent Limit	Purpose of use irrigation
Instantaneous (e.g. litres/second or m^3/hour)	Convert to a daily volume assuming taking of 12 hours per day, and then multiply by 90.
Weekly	Convert to a monthly volume, by multiplying by 4.3, and then multiplying by 6.

Where both limits are specified, use the limit which yields the smaller volume.

(3) If a consent specifically restricts taking over different periods, use the quantity and time limits specified on the consent.

(ii) Where the only purpose of use is frost-fighting, convert any consent limit to a 20 day volume.

(iii) Except as provided for by (i) and (ii), convert the consent limit to a 12-month volume.

(c) less any quantity specified in a consent as non-consumptive ~~where all of the water taken is immediately returned to the aquifer or connected surface water body~~.

The assessed maximum annual take sums only those consents allocated as groundwater under Policy 6.4.1A(c) and (d).

Principal reasons for adopting

This method is adopted to assess the annual volume of take from an aquifer, and so assist in determining the remaining allocation available from an aquifer.

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Schedules

4. Schedule of ~~specified restrictions on the exercise of permits to take~~ the allocation and restriction regime for groundwater

4A to 4C *[unchanged]*

4D Matters to be considered in calculating mean annual recharge

For any aquifer not included in Schedule 4A the setting of the maximum allocation limit will involve calculating the mean annual recharge of the aquifer (see Policy 6.4.10.A2(b)). The mean annual recharge is a statistical value based on the past climate, aquifer hydrology, soil properties, irrigation practice and other factors with direct influence over groundwater recharge.

This schedule sets out the matters to which consideration will be given when calculating the mean annual recharge of an aquifer.

4D.1 Sources of aquifer recharge

Sources of aquifer recharge may include:

(a) Land surface recharge due to rainfall excess.
(b) Land surface recharge due to irrigation excess, which should be based on the application of irrigation at an efficient rate.
(c) Land surface recharge due to intermittent runoff flowing over the land surface.
(d) Surface water recharge due to river infiltration.
(e) Surface water recharge due to wetland, pond or lake infiltration.
(f) Through-flow from any other aquifer.

The mean annual recharge can arise from a single recharge source or a combination of recharge sources, in which case the mean annual recharge is based on the combined recharge from all relevant sources.

4D.2 Methods for calculating aquifer recharge

Methods for calculating aquifer recharge from various recharge sources may include:

(a) Daily soil moisture balance for the calculation of land surface recharge.
(b) Daily soil moisture balance for calculation of irrigation recharge.
(c) Differences between surface water flows measured at different flow monitoring sites for the determination of bed infiltration passing to an aquifer.
(d) Direct measurement of land surface recharge using subsoil measuring devices such as lysimeters.
(e) Calibrated recharge estimation using unsaturated zone matric potential or saturated zone water table height fluctuation.
(f) Environmental tracers such as isotopes (radioactive or stable) and conservative anions.
(g) Groundwater computer modelling, especially where calibration and parameter estimation can be used to constrain initial estimates of surface water contributions and land surface recharge.

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Glossary

Allocation limit ~~or allocation volume~~	The maximum flow or quantity of water in a water body, which is able to be allocated to resource consents for taking.
Assessed maximum annual take	The sum of the takes of groundwater as calculated by Method 15.8.3.1.
Maximum allocation limit	The quantity of groundwater as established under Policy 6.4.10A2.
Mean annual recharge	The quantity of groundwater recharge as calculated by Schedule 4D.
Non-consumptive take[+]	A take is non-consumptive when: (1) The same amount of water is returned to the same water body at or near the location from which it was taken; and (2) There is no significant delay between the taking and the returning of the water. [+] as defined in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010
Registered community drinking water supply	A drinking water supply, which is registered under Section 69J of the Health Act and serves a community of more than 25 people for more than 60 days a year.

Table of minor and consequential changes

<table>
<tr><th>Plan Provision</th><th>Detail of proposed change</th></tr>
<tr><td>Page numbers</td><td>Update page numbers.</td></tr>
<tr><td>Footers</td><td>Change footer to read “Regional Plan: Water for Otago (Updated to <date to be inserted>)”.</td></tr>
<tr><td>Title page</td><td>Change the date to read “Updated to <date to be inserted>”.</td></tr>
<tr><td>ISBN number</td><td>Obtain new ISBN numbers for Regional Plan: Water for Otago.</td></tr>
<tr><td>Chronicle of key events</td><td>Add the following to the end of table:
<table>
<tr><th>Key event</th><th>Date notified</th><th>Date decisions released</th><th>Date operative</th></tr>
<tr><td>Plan Change 4B (Groundwater allocation) to the Regional Plan: Water</td><td>17 May 2014</td><td><Date to be inserted></td><td><Date to be inserted></td></tr>
</table></td></tr>
<tr><td>Table of contents [on page viii]</td><td>Update page numbers.

Reference to Maximum Allocation Volume:
Maximum Allocation ~~Volume~~ Limit;

Add the following:
4D Matters to be considered in calculating maximum annual recharge 20.67</td></tr>
<tr><td>Table of contents [on page 20-2]</td><td>Reference to Maximum Allocation Volume:
Maximum Allocation ~~Volume~~ Limit;

Add the following:
4D Matters to be considered in calculating maximum annual recharge 20.67</td></tr>
<tr><td>section 1.4</td><td>Proposed Plan Change 4A builds on the groundwater management system of taking water within a maximum allocation ~~volume~~ limit, established…

Proposed Plan Change 4B (Groundwater allocation) clarifies groundwater allocation provisions. It was notified on 17 May 2014 and a total of 16 submissions and 8 further submissions were received. Following the hearing, decisions on submissions received were released on … . Plan Change 4B was made operative on … .</td></tr>
</table>

<table>
<tr><td>Index to policies in 6.4; References to policies in Schedules and in map index pages</td><td>Make consequential amendments to Policy numbers in Plan and map references</td></tr>
<tr><td>Policy 6.4.10.AC</td><td>Both references to maximum allocation volume:

maximum allocation ~~volume~~ <u>limit</u></td></tr>
<tr><td>Schedule 3A: Schedule of human uses of particular aquifers</td><td>Correct the following incorrect map number for the Papakaio Aquifer:
<table>
<tr><th>Aquifer</th><th>Map</th><th>Values</th></tr>
<tr><td>Lower Waitaki Plains Aquifer</td><td>C9
C10</td><td>– Human consumption without treatment
– Stock drinking water supply and farm dairy water.</td></tr>
<tr><td>Papakaio Aquifer</td><td>~~D1~~
<u>C9a</u></td><td>– Irrigation</td></tr>
<tr><td>North Otago Volcanic Aquifer</td><td>C10</td><td>– Irrigation</td></tr>
</table></td></tr>
<tr><td>Schedule 4</td><td>All references to Maximum Allocation Volume:

Maximum Allocation ~~Volume~~ <u>Limit</u></td></tr>
<tr><td>Schedule 4B</td><td>Ettrick Basin: Calder Bore should read “<u>Cemetery</u> Bore”.</td></tr>
<tr><td>Plan Maps: Map C16</td><td>Delete every reference to Kuriwao Basin Aquifer. There is no aquifer at this location.</td></tr>
</table>

Attachment 3

Proposed Plan Change 4B (Groundwater allocation)

Section 32AA Further Evaluation Report

Hearing Committee Recommendations

Regional Plan: Water for Otago

This Section 32AA Further Evaluation Report amends the Section 32 Evaluation Report accompanying Proposed Plan Change 4B (Groundwater allocation)
This report should be read in conjunction with Proposed Plan Change 4B (Groundwater allocation) incorporating Hearing Committee Recommendations to the Regional Plan: Water for Otago

Note: All amendments to text in the Section 32 Evaluation Report are shown with additions underlined and deletions ~~struck-out~~

27 November 2014

Otago Regional Council

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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~~ The Section 32 Evaluation Report, dated 17 May 2014, ~~makes~~ made that assessment~~, and should be read in conjunction with the proposed plan change.~~ for the notified plan change. This report evaluates the amendments recommended by the Hearing Committee and should be read in conjunction with the proposed plan change incorporating the Committee's recommendations. Section 32AA of the RMA requires a further evaluation to be undertaken when a change is made since the Section 32 Evaluation Report was completed.

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~~ minimal change to the environmental, economic, social and cultural effects from the amended groundwater regime in the Water Plan. ~~This~~ The Section 32 evaluation and Section 32AA Further Evaluation reflect 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.

Option 1	**Maintain the status quo**
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.

Option 2	**Define the estimated annual allocation limit of all aquifers as the consented maximum annual take**
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.

Option 3	**Define the estimated annual allocation limit of all aquifers as the assessed maximum annual take**
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.

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.

Option 1	**Maintain the status quo**
BENEFITS:	• No plan change required.
COSTS/RISKS:	• Risk of inconsistencies among Plan administrators. • 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.

Option 2	**Include a new Schedule 4D, the method for calculating MAR**
BENEFITS:	• Greater clarity and consistency in terms of how MAR is determined. • Avoids the use of inappropriate methods for calculating the MAR.
COSTS/RISKS:	• Plan change required to set up Schedule 4D.

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. Neither does it give the opportunity to consider varying estimations of MAR when an aquifer is not listed in Schedule 4A.

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.

New takes may be appropriate in certain circumstances in an over-allocated aquifer, where effects are no more than minor, and policies do not make adequate provision.

Option 1	**Maintain the status quo**
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. • New takes with no effects may be unnecessarily prohibited.

Option 2	**Amend Rule 12.0.1.3 and Policy 6.4.10A to effectively prohibit applications for groundwater takes from an over-allocated aquifer**
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.

Option 3	**Amend Rule 12.0.1.3 Policies 6.4.10A to new 6.4.10A1B and introduce a**

	new rule to effectively prohibit applications for groundwater takes from an over-allocated Schedule 4A aquifer while allowing consent consideration as a non-complying activity for applications in an aquifer not identified in Schedule 4A
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 when an aquifer is identified in Schedule 4A. • Promotes administrative efficiency (no need to consider applications for new takes from over-allocated aquifers) when an aquifer is identified in Schedule 4A • Allows consideration of all information that helps to determine the allocation status of aquifers not identified in Schedule 4A. • Allows for new temporary consumptive takes necessary for structure construction or repair, as these will have no more than minor adverse effect on values or uses supported by the groundwater.
COSTS/RISKS:	• Plan change required.

RECOMMEND OPTION ~~2~~ 3 (NEW ~~POLICY~~ POLICIES 6.4.10A~~1~~ TO 6.4.10A1B, NEW RULES 12.0.1.3 AND 12.2.1A.3)

Prohibiting applications for groundwater takes from over-allocated aquifers specified in Schedule 4A is the most appropriate way to reduce over-allocation because it gives effect to the NPSFM and the intent of the policy framework and provides more certainty for plan users. Recommended option 3 provides more surety (of supply) and investment security for existing water takers and reduces the plan administration costs, while providing for takes with no more than minor adverse effects.

Allowing consent consideration where an application is made to take from an aquifer not specified in Schedule 4A provides the opportunity to consider varying estimation of MAR as well as other relevant information. As a non-complying activity, policies that ensure allocation in an over-allocated aquifer is avoided will give effect to the NPSFM and the intent of the Plan's objectives.

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.

Option 1	**Maintain the status quo**
BENEFITS:	• No plan change required.
COSTS/RISKS:	• Allocation may become unsustainable (risk aquifer compaction, depletion). • 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.

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.

Option 3	**Amend prohibited activity rule to effectively prohibit applications for groundwater takes that would cause an aquifer identified in Schedule 4A being over-allocated and allow consent consideration as a non-complying activity where this might happen in an aquifer not identified in Schedule 4A**
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 when an aquifer is identified in Schedule 4A. • Promotes administrative efficiency (no need to consider applications for new takes from over-allocated aquifers) when an aquifer is identified in Schedule 4A • Allows consideration of all information that helps to determine the allocation status of aquifers not identified in Schedule 4A. • Allows for new temporary consumptive takes necessary for structure construction or repair, as these will have no more than minor adverse effect on values or uses supported by the groundwater.
COSTS/RISKS:	• Plan change required.

RECOMMEND OPTION ~~2~~ 3 (NEW RULES 12.0.1.3 AND 12.2.1A.3)

Prohibiting applications for groundwater takes that cause ~~the~~ an aquifer specified in Schedule 4A being over-allocated is an effective way to prevent over-allocation of such aquifers. Recommended option ~~2~~ 3 provides more surety (of supply) and investment security for existing water takers and reduces the plan administration costs, while providing for takes with no more than minor adverse effects.

Allowing consent consideration where an application is made to take from an aquifer not specified in Schedule 4A provides the opportunity to consider varying estimation of MAR as well as other relevant information. As a non-complying activity, policies that ensure allocation that would result in an aquifer becoming over-allocated is avoided will give effect to the NPSFM and the intent of the Plan's objectives.

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~~ constructing or ~~maintain~~ repairing a structure is prohibited if the water present is in an over-allocated aquifer.

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.

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. • Allows for new temporary consumptive takes necessary for structure construction or repair, as these will have no more than minor adverse effect on values or uses supported by the groundwater.
COSTS/RISKS:	• Plan change required.

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~~ of no more than minor effect.

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.

Option 1	**Maintain the status quo**
BENEFITS:	• No plan change required.
COSTS/RISKS:	• Existing users may be adversely affected if actual take exceeds assessed take.

	• Risk of decisions being made on insufficient or inappropriate information.

Option 2	**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**
BENEFITS:	• Clarity around information requirements for consent applications avoids unnecessary consent processing costs for applicants • Protects existing consent holders. • Consistency among Plan provisions. • Consideration of water usage over a 5-year period provides for reasonable assessment of actual water needs and facilitates good decision-making.
COSTS/RISKS:	• Plan change required. • Slows down the progressive reduction in the allocation of over-allocated aquifers. • Standard for information requirements may generate additional cost for applicants. • 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.

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. Notification and hearings

The proposed plan change was publicly notified on 17 May 2014 and resulted in 16 submissions and 8 further submissions. An Officers' Report with recommendations was prepared on 29 August 2014, along with a full summary of all submissions and further submissions. A hearing was held on 16 September 2014 in Dunedin, at which 5 submitters spoke to their submissions and 6 submitters asked for tabled evidence to be considered in their absence.

8. 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.

9. 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)
  - Section 32 Evaluation Report: Proposed Plan Change 4B (Groundwater allocation) 17 May 2014
  - Officers' Report on Decisions Requested - Proposed Plan Change 4B (Groundwater allocation) 29 August 2014 (including Appendix 1, Summary of Decisions Requested)

- Other material:
  - National Policy Statement on Freshwater Management. Ministry for the Environment 2014

OTAGO REGIONAL COUNCIL

Minutes of a meeting of the Hearing Committee for Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago held at Otago Regional Council, 70 Stafford Street, Dunedin on Tuesday 11 November 2014, starting at 10.00am

Membership:	**Cr Bryan Scott** (Chairperson) **Cr Louise Croot** **Cr Sam Neill** **Cr David Shepherd** (as reserve)
In Attendance:	**Manager Policy, Dale Meredith** **Policy Analyst, Tom De Pelsemaeker** **Groundwater Scientist, Rebecca Morris**

RECOMMENDATIONS

Item 1

2014/1527 **Hearing of Submissions on Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago.**
DPRP, 24 October 2014

Cr Scott welcomed those people attending the hearing of submissions and further submissions relating to Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago.

Information was tabled from 2 submitters:

Submitter 2: Federated Farmers Inc
Submitter 8: Horticulture New Zealand

Cr Croot moved
Cr Neill seconded

That the tabled information is received.

Motion carried.

One submitter and further submitter, Contact Energy Ltd, presented their submissions in person.

Following the hearing of submitters, the committee adjourned to deliberate.

Cr Croot moved
Cr Neill seconded

That the Hearings Committee on Proposed Plan Change 4C (Groundwater Management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago make its recommendations, in Appendix 1, to Council.

Motion carried.

Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer)

to the Regional Plan: Water for Otago

Recommendations of the Hearing Committee to Council

Otago Regional Council

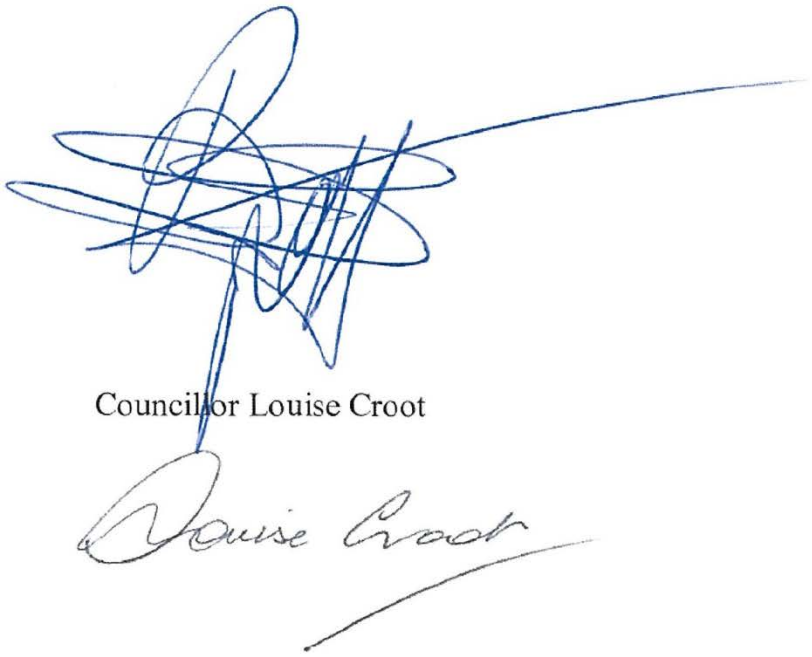
10 December 2014

This report presents the recommendations of the Hearing Committee to the Otago Regional Council on submissions and further submissions to Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago.

Hearings Committee:

Councillor Bryan Scott

Chairperson



Councillor Louise Croot

Councillor Sam Neill

Abbreviations

MAL	Maximum Allocation Limit (previously Maximum Allocation Volume (MAV))
MAR	Mean annual recharge
NPSFM	National Policy Statement for Freshwater Management 2014
ORC	Otago Regional Council
Proposed plan change / plan change	Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago
RMA	Resource Management Act 1991
Section 32 Evaluation Report	The evaluation report assessing alternatives, benefits and costs for proposed plan change 4C to the Water Plan as required by Section 32 of the RMA
SOE	State of the Environment (monitoring undertaken in accordance with Section 35(2) RMA)
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.

Note: text marking

~~Operative word~~ / notified word	Notified change, showing change proposed from the Water Plan
~~Notified word~~ / amended word	Amendment recommended in this report

Background

Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) proposes to set a maximum allocation limit of 4 Mm^3/yr for the Cromwell Terrace Aquifer in Schedule 4A of the Water Plan. This aquifer is currently shown in Map C3 of the Water Plan Maps.

The maximum allocation limit will apply to new groundwater takes that are not permitted under the provisions of the Water Plan.

Plan Change 4C was publicly notified in the Otago Daily Times on Saturday 16 August 2014 and submissions closed on Friday 12 September 2014. A total of 8 submissions were received.

The *Summary of Decisions Requested* and request for further submissions was notified on Saturday 27 September 2014, with further submissions closing on Friday 10 October 2011. There were 3 further submissions received.

The *Officer's Report on Decisions Requested* which evaluated decisions requested by submitters and further submitters and made recommendations to the Hearing Committee was released on Thursday 23 October 2014.

Submissions on the proposed plan change were heard on Tuesday 11 November 2014 in Dunedin.

The main matters raised by submitters on Plan Change 4C broadly related to:

- Protecting the lake levels of Lake Dunstan and hydro-electric operations on the Clutha/Mata-Au;
- Monitoring the effects of the proposed maximum allocation limit of 4 Mm^3/yr on the water levels in the Cromwell Terrace Aquifer; and
- Providing for surface water takes.

We thank all of the people who have participated in this plan change process. We have read all submissions and listened to evidence presented at the hearing. In preparing our recommendations we have also been mindful of the Otago Regional Council's statutory responsibilities under the Resource Management Act 1991 (RMA), the National Policy Statement on Freshwater Management 2014 (NPSFM).

As a result of the submission and hearing process, our recommendation to the Otago regional Council is to adopt the plan change as proposed.

Our recommendations follow.

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CHAPTER 1 – A NEW MANAGEMENT REGIME

The notified changes to the Water Plan sought to set a tailored maximum allocation limit for the Cromwell Terrace Aquifer in Schedule 4A of the Water Plan.

1.1 Proposed Maximum Allocation Limit

Schedule 4A
Plan Change 4C page 1
Summary of Decisions Requested: pages 11–157

The notified plan change proposed to set a maximum allocation limit of 4.0 Mm3/yr for the Cromwell Terrace Aquifer in Water Plan Schedule 4A.

Most submitters were in support of the proposal to set a MAL of 4.0 Mm3/yr in Schedule 4A, although one submitter stated there was a need to make sure that Lake Dunstan is not affected by an excessive groundwater abstraction.

1.1.1 Recommendations

We considered the submissions and recommend the following:

(a) Adopt Schedule 4A as notified.

1.1.2 Reasons

- The proposed MAL of 4.0 Mm^3/yr is based on a comprehensive scientific investigation and has been developed in consultation with relevant stakeholders within the local and wider community.
- A MAL of 4.0 Mm3/yr will allow the community to provide for their social and economic well-being, while avoiding any adverse effects on the aquifer, nearby surface water bodies (Lake Dunstan) or on any existing value supported by these resources. Therefore, it is considered that the proposal achieves the goal of sustainable management of our natural and physical resources.

1.2 Aquifer restriction levels

Schedule 4B
Plan Change 4C page 1
Summary of Decisions Requested: pages 11-16

The notified plan change does not propose to set aquifer restriction levels for the Cromwell Terrace Aquifer in Schedule 4B of the Water Plan.

Most submitters accepted the proposal not to include aquifer restriction levels for the Cromwell Terrace Aquifer. However, one submitter stated there was a need to set restriction levels for groundwater takes from the aquifer in order to provide better protection for existing hydro-electric operations on the Clutha.

1.2.1 Recommendations

We considered the submissions and recommend the following:

(a) Adopt Plan Change 4C as notified.

1.2.2 Reasons

- There are currently no known issues with generalised or localised water table decline. Scientific investigations have indicated that the risk of future water table decline is negligible due to the aquifer's high transmissivity and permeability, and its strong hydrological connection to Lake Dunstan.
- The effectiveness of restriction levels to protect hydro-electric operations on the main stem of the Clutha is limited because of the distance of bores from the lake. The magnitude and timing of stream depletion effects on Lake Dunstan caused by groundwater takes on the Cromwell Terrace depends on a wide range of factors, including hydraulic properties of the aquifer, the location of the take and the rate of pumping.
- Any potential impacts of new groundwater takes from the Cromwell Terrace Aquifer on nearby bores or on lake levels of Lake Dunstan can be more effectively dealt with through the resource consent decision-making process.
- Resource consent conditions restricting the taking of water during periods of low surface flows in the Upper Clutha catchment can be imposed where a proposed groundwater take is likely to have a high degree of hydraulic connection to the Clutha or Kawarau Rivers.
- Setting restrictions levels for groundwater takes from the Cromwell Terrace Aquifer based on the lake and/or flow levels of various surface water bodies and for the purpose of protecting hydro-electricity generation operations on the Clutha requires amending the layout of Schedule 4B and the policy framework in Chapter 6. This is considered beyond the scope of the current plan change.

CHAPTER 2 – RECOMMENDATIONS ON OTHER PLAN CHANGE MATTERS

2.1 Minor and consequential amendments

Chronicle of Key Events, Section 1.4, Schedule 4B
Plan Change 4C page 2
Summary of Decisions Requested: page 16

The plan change proposes a number of minor and consequential changes.

2.1.1 Recommendations

We considered the submissions and recommend the following:

(a) Amend the definition of Datum in the Glossary:

Datum	The fixed level for basing subsequent level measurements, in this case datum means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres ~~below mean sea level~~.

(b) Adopt any other minor and consequential changes as notified.

2.1.2 Reasons

- The correction to Schedule 4B provides for the correct interpretation and consistent administration of the Plan.
- The amended definition of Datum in the glossary provides clarity and avoids level measurements being based on the mean sea level, which is likely to vary over time.
- Clause 10(2) of Schedule 1 RMA provides for any necessary consequential alterations.

CHAPTER 3 – MATTERS NOT ADDRESSED IN THIS PLAN CHANGE

3.1 Beyond the scope of the plan change

Summary of Decisions Requested: page 16

Matters that were raised during the submissions and hearing process and that are considered beyond the scope of Plan Change 4C include requests relating to the taking of surface water and the monitoring of the effects of the proposed plan change.

3.1.1 Recommendations

We considered the submissions and recommend the following:

(a) Make no amendment to address matters beyond the scope of this plan change

3.1.2 Reasons

- Amending the plan change to extend its scope to surface water takes would require a new plan change to ensure that the communities that are potentially affected by these matters are consulted, notified and heard.
- Since 2011, ORC has been monitoring groundwater fluctuations and groundwater quality as part of its State of the Environment (SOE) monitoring program. ORC's SOE monitoring program will continue to assist with identifying issues in regards to any effects groundwater abstraction may have on the aquifer. However, the budget and targets for ORC's monitoring function are set through the annual planning process under the Local Government Act 2002 and there is no need to prescribe in a regulatory plan how ORC will monitor the effects of the plan change.

Appendix 1

Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer)

Regional Plan: Water for Otago

Incorporating Hearing Committee recommendations on decisions requested

Otago Regional Council

10 December 2014

Note:
The base document for this document is the Regional Plan: Water for Otago (operative 1 May 2014). Changes shown in this document compare all recommended changes (as notified, and as recommended by the Hearing Committee), to the Operative Water Plan (single ~~strikethrough~~ and underline)

On 17 May 2014, Proposed Plan Change 4B (Groundwater allocation) to the Regional Plan: Water for Otago was notified. Changes to the Operative water Plan made by Proposed Plan Change 4B (Groundwater allocation) are shown in this document in blue italics. **.**

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4. Schedule of specified restrictions on the exercise of permits to take groundwater

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

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

4A *Maximum allocation limits* for groundwater takes from aquifers

Aquifer Name	**Map Reference**	***Maximum Allocation Limit*** **(million cubic metres per year)**
Cromwell Terrace Aquifer	C3	4
North Otago Volcanic Aquifer	C10	7

4B *[Unchanged]*

Table of minor and consequential changes

<table>
<tr><th>Plan Provision</th><th>Detail of proposed change</th></tr>
<tr><td>Page numbers</td><td>Update page numbers.</td></tr>
<tr><td>Footers</td><td>Change footer to read “Regional Plan: Water for Otago (Updated to <date to be inserted>)”.</td></tr>
<tr><td>Title page</td><td>Change the date to read “Updated to <date to be inserted>”.</td></tr>
<tr><td>ISBN number</td><td>Obtain new ISBN numbers for Regional Plan: Water for Otago.</td></tr>
<tr><td>Chronicle of key events</td><td>Add the following to the end of table:
<table>
<tr><th>Key event</th><th>Date notified</th><th>Date decisions released</th><th>Date operative</th></tr>
<tr><td>Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water</td><td><Date to be inserted></td><td><Date to be inserted></td><td><Date to be inserted></td></tr>
</table></td></tr>
<tr><td>section 1.4</td><td>Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) sets a maximum allocation limit for the Cromwell Terrace Aquifer. It was notified on Saturday 16 August 2014, and a total of 8 submissions and 3 further submissions were received. Following the hearing, decisions on submissions received were released on … Plan Change 4C was made operative on … .</td></tr>
<tr><td>Schedule 4B</td><td>Replace the words “(m above mean sea level)” with “(metres above datum)” under the heading “Restriction levels” as follows:
<table>
<tr><th rowspan="2">Aquifer
See Maps D1–D4</th><th rowspan="2">Aquifer Reference Bore
See Maps D1–D4</th><th rowspan="2">Aquifer maximum height (metres above datum)</th><th colspan="3">Restriction levels
(metres above datum ~~above mean sea level~~)</th></tr>
<tr><th>25% restriction or response in terms of Council recognised rationing regime*</th><th>50% ~~R~~restriction</th><th>100% restriction</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Glossary</td><td>Amend the definition of datum as follows:

Datum The fixed level for basing subsequent level measurements, in this case datum means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres ~~below mean sea level~~.</td></tr>
</table>