

# **Regional Plan: Water for Otago**

## **Proposed Plan Change 7 (Water Permits)**



**As amended by Environment Court  
Decisions No. [2021] NZEnvC 164 &  
No. [2021] NZEnvC 179  
Track changes version  
17 December 2021**

## **NOTE FOR THE READER**

### **How the amendments are shown**

This version of Proposed Plan Change 7 shows the amendments to the provisions of Proposed Plan Change 7 made by the Environment Court in its:

- interim decision released on 22 October 2021; and
- final decision released on 17 November 2021.

The base text used to show the amendments made by the Environment Court is the text of Proposed Plan Change 7 as notified by the Otago Regional Council on 18 March 2020. The text of the notified version of Proposed Plan Change 7 is shown as clean text (no underlining, no strikethrough)

All new text added by the amendments made by the Environment Court is shown underlined.

All text deleted by the amendments made by the Environment Court is shown in strikethrough.

*Insert the following text as two new paragraphs at the end of the section entitled 'How to Use the Regional Plan: Water'*

- [1] Applications for water permits to replace ~~deemed~~ permits or to replace water permits that expire before 31 December 2025 will be assessed in accordance with the objective, policies and rules set out in Chapter 10A of this Regional Plan: Water.
- [2] Applications for ~~new~~ water permits that are not replacing either a ~~deemed~~ permit or an existing water permit that expires before 31 December 2025, will be assessed in accordance with the provisions in Chapters 5, 6, 12 and 20, except that the duration of any water permit will be determined in accordance with the policies in Chapter 10A.

*Insert the following new Chapter in the Water Plan immediately following Chapter 10*

# 10A

## Objective, Policies & Rules for Replacement Water Take & Use Permits



## 10A.1 Objective

### 10A.1.1 Facilitate an efficient and effective transition from the operative freshwater planning framework toward a new integrated regional planning framework, by managing:

- (a) the take and use of freshwater; and
- (b) the replacement of Deemed Permits, and
- (c) the replacement of water permits for takes and uses of freshwater where those water permits expire prior to 31 December 2025.

~~Transition toward the long-term sustainable management of surface water resources in the Otago region by establishing an interim planning framework to manage new water permits, and the replacement of deemed permits and water permits to take and use surface water (including groundwater considered as surface water) where those water permits expire prior to 31 December 2025, until the new Land and Water Regional Plan is made operative.~~

## 10A.2 Policies

### Replacement consents

#### 10A.2.1 Irrespective of any other policies in this Plan, avoid granting resource consents that replace ~~d~~Deemed ~~p~~Permits, or water permits ~~for~~ to takes and uses of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, except where:

- (a) The ~~d~~Deemed ~~p~~Permit or water permit that is being replaced is a valid permit; and
- (b) There is no increase in the area under irrigation, ~~if the abstracted water is used for irrigation,~~ except where any additional area to be irrigated is only for orchard or viticulture land uses and all mainline irrigation pipes servicing that additional area were installed before 18 March 2020; and
- ~~(c)~~ There is no increase in the instantaneous rate of abstraction; and
- ~~(d)~~ Any existing residual flow, minimum flow or take cessation condition is applied to the new permit; and
- (d) For takes other than community water supplies there is no increase in:
  - (i) the historical instantaneous rate of abstraction; and
  - (ii) any historical volume of water taken.
- ~~(e) There is a reduction in the volume of water allocated for abstraction.~~

## Duration

10A.2.2 Irrespective of any other policies in this Plan concerning consent duration, only grant ~~new~~ resource consents for ~~the~~ takes and uses of freshwater, where this activity was not previously authorised by a Deemed Permit or by a water permit expiring prior to 31 December 2025, for a duration of no more than six years.

10A.2.3 Irrespective of any other policies in this Plan concerning consent duration, ~~only~~ avoid granting new resource consents that replace ~~a~~ Deemed permits, or resource consents that replace water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, for a duration of ~~no~~ more than six years; ~~except where Rule 10A.3.2.1 applies and:~~

(a) where the take and use of water replaces a Deemed Permit associated with hydro-electricity generation infrastructure listed in Schedule 10A.5.1 and the applicant takes practicable steps to remedy or mitigate any adverse effects on the environment arising from the activity.

~~The activity will have no more than minor adverse effects (including no more than minor cumulative effects) on the ecology and the hydrology of the surface water body (and any connected water body) from which the abstraction is to occur; and~~

~~(b) The resource consent granted will expire before 31 December 2035.~~

## Deemed Permits

10A.2.4 Where the flow at the point of take of a Downstream Permit with a Higher Right of Priority is insufficient to supply that permit, the holder of an Upstream Replacement Water Permit may be required to cease taking water.

## 10A.3 Rules

*Note 1: If the application is for a resource consent for the taking and use of water and the activity was not previously authorised by an existing Deemed Permit or by a water permit expiring before 31 December 2025, refer to the rules in Chapter 12 of this Plan.*

*Note 2: Where, under Rule 10A.3.1.1, any of entry conditions (iii), (iv) and (vi) do not apply to an activity for which resource consent is sought, that condition is deemed to be met.*

*Note 3: The matters of control in Rule 10.3.1.1 and matters of discretion in Rule 10A.3.1A.1 refer to 'existing water permit conditions'. The phrase 'existing water permit conditions' is to be interpreted as*

*applying to both Deemed Permits and existing water permits referred to in the entry conditions to the rules.*

### 10A.3.1 Controlled activity: Resource consent required

10A.3.1.1 Despite any other rule or rules in this Plan:

- (a) any activity that is currently authorised under a Deemed Permit; or
- (b) the take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is currently authorised by an existing water permit where that water permit expires prior to 31 December 2025;

is a **controlled** activity provided the following conditions are met:

- (i) ~~the~~ consent duration sought is no more than six years; and
- (ii) ~~the~~ Deemed Permit or water permit that is being replaced is a valid permit; and
- (iii) ~~the~~ application demonstrates that the total land area under irrigation does not exceed that irrigated in the 2017-2018 irrigation season, if the abstracted water is used for irrigation the maximum area irrigated in the period 1 September 2017 to 18 March 2020, if the abstracted water is used for irrigation except where:
  - (a) any additional area to be irrigated is only for orchard or viticulture land uses and all mainline irrigation pipes servicing that additional area were installed before 18 March 2020; and
- (iv) except where (vii) applies, the rate of take shall be no more than the average maximum rate of take limit recorded during the period 1 July 2012 – 30 June 2017 and calculated in accordance with the method rate of take limit recorded during the water years (1 July to 30 June) for which water meter data is available up until 30 June 2020, as calculated in accordance with the methodology in Schedule 10A.4; and
- (v) ~~Any~~ existing residual flow, minimum flow, or take cessation condition (whichever is applicable) on the expiring Deemed Permit or water permit is included in the application for resource consent; and
- (vi) except where (vii) applies, the volume of water taken shall be no more than the average maximum of the daily volume limit, or and monthly volume limit, or and annual volume limit (whichever one or more are applicable) recorded during the period 1 July 2012 – 30 June 2017 water years (1 July to 30 June) for which water meter data is available up until 30 June 2020, and as calculated in accordance with the method methodology in Schedule 10A.4; and



- (vii) for takes authorised by a Deemed Permit or water permit where metering is not required by condition of resource consent or by the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, the rate of take and the volume of water sought is no more than the existing consented instantaneous rate of take and volumes; and
- (viii) where the application is to replace an Upstream Deemed Permit that was subject to a Downstream Permit with a Higher Right of Priority, the applicant proposes a condition:
  - (a) to cease taking water when:
    - (i) there is insufficient flow at the point of take of the Downstream Permit with a Higher Right of Priority; and
    - (ii) notice has been given by the holder of the Downstream Permit with a Higher Right of Priority; and
  - (b) requiring the provision of a Contact Management Plan to the Consent Authority.

The Council reserves control over the following matters:

- ~~(a) Intake method and flow rate controls to avoid or mitigate fish entrainment; and~~
- ~~(ba) in accordance with historical use and existing water permit conditions, the volume and rate of water taken, dammed, discharged or diverted; and the timing and frequency of the take or damming or diversion or discharge; and~~
- (aa) where (iii)(a) applies, the maximum size of the additional area to be irrigated and use of good management practices on the additional area; and
- (b) any existing consent conditions concerning operating procedures administered through a water allocation committee that exists for the catchment; and
- (c) any other conditions on the expiring permit to be replaced, where those matters are not otherwise addressed by the entry conditions of this rule or matters of control; and
- (d) a condition may be imposed requiring the holder of an Upstream Replacement Water Permit:
  - (i) to cease taking water when:
    - (ia) there is insufficient flow at the point of take authorised by a Downstream Permit with a Higher Right of Priority; and
    - (ib) notice has been given by the holder of the Downstream Permit with a Higher Right of Priority; and

- ~~(ii) requiring the provision of a Contact Management Plan to the Consent Authority; and~~
- ~~(c) Efficiency of water use and how that efficiency is to be sustained for the duration of the water permit; and~~
- ~~(d) Provision of fish passage; and~~
- ~~(e) The rules or operating procedures of any relevant water allocation committee that exists for the catchment; and~~
- ~~(f) Minimum flow, residual flow or take cessation conditions; and~~
- ~~(g) Review conditions; and~~
- ~~(h) Compliance monitoring; and~~
- ~~(i) The point and method of measurement and the method for transmitting recorded data to Council.~~

Pursuant to sections 95A and 95B of the RMA, an application for resource consent under this rule will be processed and considered without public or limited notification. ~~Limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under Section 95B(3) of the RMA.~~

*~~Advice Note: If the application is for a new water permit (and not the replacement of a deemed permit or replacement of an expiring water permit) refer to the rules in Chapter 12 of this Plan~~*

### **10A.3.1A Restricted discretionary activity: Resource consent required**

#### 10A.3.1A.1 Despite any other rule or rules in this Plan:

- (a) any activity that is currently authorised under a Deemed Permit; or
- (b) the take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is currently authorised by an existing water permit where that water permit expires prior to 31 December 2025;

is a restricted discretionary activity providing the following conditions are met:

- (i) the activity meets conditions (i), (ii), (iii), (v), and (viii) of Rule 10A.3.1.1 but does not meet conditions (iv) and (vi); and
- (ii) Where the activity does not meet (iv) and (vi) of Rule 10A.3.1.1 a water meter for the take has been installed, or an exemption under the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 from water metering has been granted.

The Council will restrict its discretion to the following matters:

- (a)

- (i) whether the water meter data in combination with other relevant methods and data accurately represents historical use; and
- (ii) whether the volume and rate taken, dammed, discharged or diverted is in accordance with the historical rate of take and volume and within existing water permit conditions; and
  - (ia) for community water supplies, within existing water permit volume and rate limits, the extent to which there is a need to provide for population growth within the term of the consent; and
  - (ib) where 10A.3.1.1 (iii)(a) applies, the maximum size of the additional area to be irrigated and use of good management practices on the additional area; and
- (b) any existing consent conditions concerning operating procedures administered through a water allocation committee that exists for the catchment; and
- (c) any other conditions on the expiring permit to be replaced, where those matters are not otherwise addressed by the entry conditions of this rule or matters of discretion; and
- (d) a condition may be imposed requiring the holder of an Upstream Replacement Water Permit:
  - (i) to cease taking water when:
    - (ia) there is insufficient flow at the point of take authorised by a Downstream Permit with a Higher Right of Priority; and
    - (ib) notice has been given by the holder of the Downstream Permit with a Higher Right of Priority; and
  - (ii) requiring the provision of a Contact Management Plan to the Consent Authority; and
- (e) review conditions; and
- (f) compliance monitoring; and
- (g) the point and method of measurement and the method for transmitting recorded data to Council.

Pursuant to sections 95A and 95B of the RMA, an application for resource consent under this rule will be processed and considered without public or limited notification.

### **10A.3.1B.1 Restricted discretionary activity (hydro-electricity generation activities)**

Despite any other rule or rules in this Plan, any activity that is currently authorised under a Deemed Permit where the take and use of water is for hydro-electricity generation infrastructure listed in Schedule 10A.5.1, is a **restricted discretionary** activity providing the following conditions are met:

- (i) the consent duration sought expires no later than 2035; and
- (ii) the Deemed Permit that is being replaced is a valid permit; and
- (iii) for takes authorised by a Deemed Permit where metering is not required by a condition of resource consent or by the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, the rate of take and the volume of water sought is no more than the existing consented instantaneous rate of take and volumes; and
- (iv) any existing residual flow, minimum flow, or take cessation condition (whichever is applicable) on the expiring Deemed Permit is included in the application for resource consent; and

The Council will restrict its discretion to the following matters:

- (a) (i) whether the water meter data in combination with other relevant methods and data accurately represents historical use; and
- (ii) whether the volume and rate of take is in accordance with the historical volume and rate of take, and within the conditions of the expiring Deemed Permit; and
- (b) any other conditions on the expiring Deemed Permit to be replaced where those matters are not otherwise addressed by the entry conditions of this rule or matters of discretion; and
- (c) review conditions; and
- (d) compliance monitoring; and
- (e) the point and method of measurement and the method for transmitting recorded data to the Council; and
- (f) the methods available to remedy or mitigate any adverse effects on the environment arising from the activity.

### **10A.3.2 Non-complying activity: Resource consent required**

10A.3.2.1 Despite any other rule or rules in this Plan:

- (a) any activity that is the replacement of an activity authorised under a Deemed Permit; or
- (b) the take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is the replacement of a take and use authorised by an existing water permit where that water permit expires prior to 31 December 2025;

that does not meet any one or more of the conditions of

- (i) Rule 10A.3.1.1 (excluding conditions (iv) and (vi));
- (ii) Rule 10A.3.1A.1;
- (iii) Rule 10A.3.1B.1

is a ***non - complying*** activity.

### **10.3A Definition**

#### **Valid permit**

In the context of Chapter 10A, means a resource consent or Deemed Permit that

- (1) has not expired; or
- (2) has expired but where the consent holder can still exercise the permit under s124 of the RMA; or
- (3) has not been surrendered under s138 of the RMA; or
- (4) has not been cancelled under s126 of the RMA; or
- (5) has not lapsed under s125 of the RMA.

#### **Mainline irrigation pipes**

The primary permanently installed pipelines delivering water to the irrigated area including the connections to the headworks at the pumping location.

#### **Take cessation condition**

Means a condition that limits or restricts the taking of water under specified circumstances, including:

- (a) during certain times or periods across the year;
- (b) when other water permits within the catchment or from the same water body are being exercised;
- (c) when water is being abstracted under the same water permit at an alternative point of take;
- (d) when recharge, water yield or inflows into the catchment or water body from which water is being taken is below a specified flow or water level.

#### **Deemed Permit**

has the same meaning as s413 of the RMA and includes any deemed condition conferring a right of priority.

#### **Downstream Permit with a Higher Right of Priority**

means a Deemed Permit that had not been replaced by a resource consent commencing before 2 October 2021, that was subject to a right entitling the permit holder to require the holder of an Upstream Deemed Permit to cease taking water.

#### **Upstream Deemed Permit**

means a Deemed Permit that has not been replaced by a resource consent commencing before 2 October 2021, that was subject to a right of priority entitling a Downstream Permit with a Higher Right of Priority to require the holder of an Upstream Deemed Permit to cease taking water.

### **Upstream Replacement Water Permit**

means a resource consent granted under the RMA to replace an Upstream Deemed Permit.

### **Contact Management Plan**

A plan that records up-to-date contact details for the consent holder to be served written notice (which may be an email address) and an acknowledgement that the contact details can be provided to a permit holder with a higher right of priority by the Otago Regional Council.

### **Insufficient flow**

where the flow is below the level at which the holder of a Downstream Permit with a Higher Right of Priority is able to abstract water at their authorised rate of take.

### **Notice**

A communication in writing sent to the contact details recorded in the Contact Management Plan and copied to the Consent Authority that contains the following detail:

- (a) the name and consent number of the Consent Holder giving notice;
- (b) the name and consent number of the Consent Holder required to cease taking water;
- (c) date and time of notice issue;
- (d) an instruction to cease taking water; and
- (e) a start date and time and end date and time for the cessation; the cessation period must not be longer than 72 hours from when the cessation commences.

## 10A.4 **Schedule: Methodology for calculating assessed actual usage for surface-water and connected groundwater takes ~~for irrigation purposes~~**

The methodologies in Schedules 10A.4.1 to 10A.4.4 outline the different steps that need to be taken to calculate the assessed actual usage for surface-water and connected groundwater takes.

Each of these steps apply to any activity authorised by a water permit for the take and use water, except for steps 4(a) to (g) in Schedule 10A.4.1 and steps 4(a) to (h) in Schedule 10A.4.2, which do not apply to applications for:

- the take and use of water for community water supplies; or
- the take and use of water where the only purpose is for hydro-electricity generation.

Note 1: Where ‘consent’ or ‘permit’ is used in Schedule 10A.4 this means the Deemed Permits and existing water permits in the entry conditions to Rule 10A.3.1.1.

### 10A.4.1 **Methodology for calculating ‘Rate of Take Limit’**

The ‘Rate of Take Limit’ (litres per second – l/s) shall be determined by calculating the maximum rate of take taken in all water years (1 July to 30 June) up until 30 June 2020 for which water meter data is available, using the following methodology ~~Average Maximum of the actual rate taken. In order to achieve this, the actual rate taken across the hydrological year (1 July to 30 June) will be analysed to determine the maximum rate taken at any time during that year. The maximum rate taken in each hydrological year will then be summed and divided by the number of years analysed.~~

#### **Methodology**

- (1) Water meters record rate of take over different time intervals.
  - a. Where ~~the~~ a water meter records a volume of water taken over a fixed ~~period of~~ time interval which is less than or equal to an hour, the rate of take will be determined by first calculating the hourly volume and then converting this to a l/s rate. For example, 40 m<sup>3</sup> taken over one hour will equate to a rate of take of 11.11 l/s ~~calculated by converting the volume taken in litres by the interval recorded by the meter. For example, 10 m<sup>3</sup> taken over a 15-minute period will equate to a rate of take of 11.11 l/s.~~
  - b. Where a water meter records the volume of water taken over an interval of time greater than an hour, the hourly rate of take will be calculated and used as the base data set.
- (2) Any measurement that is at or below 0 l/s will be removed.

- (3) Any measurement that exceeds the ~~a~~Authorized (~~e~~Consented) ~~r~~Rate of Take by less than the margin of error of the water meter is rounded adjusted down to the ~~a~~Authorized ~~r~~Rate of Take.
- (4) ~~If A~~any measurement (including those from step 3) deviates from the general pattern of taking, it shall be adjusted down to the maximum of the typical data record across the full data record. The methodology for undertaking this step is set out below that exceeds the authorised rate of take by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:
- (a) Order the rate of take data by size (descending order).
  - (b) Determine D, where D is the number of complete water years covered by the record being considered.
  - (c) Calculate N (where N is the number of measurements) =  $18+(3\times D)$ .
  - (d) Find the highest value.
  - (e) Calculate the number of other data values which are within the margin of error of that value.
  - (f) Repeat steps (d) and (e) until the first value which has N data values within the margin of error (+ and -) of that value is found.
  - (g) This number is the maximum typical rate of take.
- The margin of error to be applied to any calculation in steps (4)(e) and (4)(f) will be either  $\pm 5\%$  for piped takes or  $\pm 10\%$  for water taken by any other method, including by any open channel or a partially full pipe.
- Steps 4 (a) to (g) above do not apply to applications for community water supplies or where the only purpose is for hydroelectricity generation.
- a) ~~Abstracting above the consented rate of take, and~~
  - b) ~~errors caused by faulty equipment, and~~
  - e) ~~abstraction rates that are high due to natural events such as floods.~~
- (5) 'Rate of Take Limit' (litres per second – l/s) will be determined as the maximum value after steps (1) to (4) have been completed.
- ~~(5) The margin of error to be applied to any calculation will be either 5% or 10% depending on:~~
- a) ~~the margin of error specified in any consent or permit being replaced, or~~
  - b) ~~the results of the last verification presented to the Otago Regional Council, or~~
  - e) ~~the margin of error specified by the meter's manufacturer.~~



- (6) ~~The maximum rate taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.~~

#### 10A.4.2 Methodology for calculating Daily Volume Limit (m<sup>3</sup>)

~~The ‘Daily Volume Limit’ shall be determined by calculating the maximum daily volume taken in all water years (1 July to 30 June) up until 30 June 2020 for which water meter data is available, using the following methodology Average Maximum of the actual ‘Daily Volume’ taken. In order to achieve this, the maximum ‘Daily Volume’ taken on any day in each water year (1 July to 30 June) will be calculated. The maximum ‘Daily Volume’ in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.~~

##### Methodology

- (1) ~~Where a consent or permit being replaced does not include a ‘Daily Volume Limit’, the Authorised Daily Volume will be calculated based on the following formula:~~

$$\text{Authorised Daily Volume m}^3 = ((\text{Consented Rate of Take l/s}) \times 86,400)/1,000$$

~~Where a consent or permit does not specify a rate of take in l/s the Consented Rate of take will be determined by dividing the volume specified on the permit over the shortest duration by the timeframe over which that volume can be taken.~~

- (2) Any measurement that is at, or below, 0 m<sup>3</sup> will be removed.
- (3) ~~On Any day that where the Actual Daily Volume exceeds the Authorised (consented) or calculated ~~d~~Daily ~~v~~Volume, by less than the margin of error on the water meter the Actual Daily Volume is rounded adjusted down to the consented volume Authorised Daily Volume.~~
- (4) ~~If any measurement (including those from step 3) deviates from the general pattern of taking, it shall be adjusted down to the maximum of the typical data record across the full data record. The methodology is set out below:~~
- (a) ~~Order the daily volume data by size (descending order).~~
  - (b) ~~Determine D, where D is the number of complete water years covered by the record being considered.~~
  - (c) ~~Calculate N (where N is the number of measurements) = 1+(2xD).~~
  - (d) ~~Find the highest value.~~
  - (e) ~~Calculate the number of other data values which are within the margin of error of that value.~~
  - (f) ~~Repeat steps (d) and (e) until the first data value which has N data values within the margin of error (+ and -) of that point is found.~~

- (g) This number is the maximum typical daily volume.
- (h) Adjust any daily volumes above the maximum typical daily volume, down to the maximum typical daily volume.

The margin of error to be applied to any calculation in steps (4)(e) and (4)(f) will be either  $\pm 5\%$  for piped takes or  $\pm 10\%$  for water taken by any other method, including by any open channel or a partially full pipe.

Steps 4 (a) to (h) above do not apply to applications for community water supplies or where the only purpose is for hydroelectricity generation.

- (5) The ‘Daily Volume Limit’ will be determined as the maximum value after steps (1) to (4) above have been completed.
- ~~(4) Any day where the volume taken exceeds the authorised (consented) or calculated volume by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:~~
  - ~~a) — overtaking outside of existing authorised limits, and~~
  - ~~b) — errors caused by faulty equipment, and~~
  - ~~c) — overtaking caused by natural events such as floods.~~
- ~~(5) The margin of error will be treated as being either 5% or 10% depending on:~~
  - ~~a) — the margin of error specified in any consent or permit being replaced, or~~
  - ~~b) — the results of the last verification presented to the Otago Regional Council, or~~
  - ~~c) — the margin of error specified by the meter’s manufacturer.~~
- ~~(f) The maximum ‘Daily Volume’ taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.~~

### **10A.4.3 Methodology for calculating Monthly Volume Limit (m<sup>3</sup>)**

The ‘Monthly Volume Limit’ shall be determined by calculating the maximum monthly volume taken in all water years (1 July to 30 June) up until 30 June 2020 for which water meter data is available, using the following methodology—Average Maximum of the actual ‘Monthly Volume’ taken. In order to achieve this, the maximum ‘Monthly Volume’ taken in any month in each water year (1 July to 30 June) will be calculated. The maximum ‘Monthly Volume’ in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.

## Methodology

- (1) Where a consent or permit being replaced does not include a 'Monthly Volume Limit' the ~~A~~authorised Monthly Volume will be calculated based on the following formula:

~~Monthly Limit~~ Authorised Monthly Volume m<sup>3</sup> = Authorised (Consent Daily Volume or Calculated Daily Volume) (as determined under Step (1) in the methodology in Schedule 10A.4.2) x 30.4

- (2) Actual Monthly Volumes will be calculated based on the sum of the ~~assessed~~ Ddaily Vvolumes taken in each calendar month. For the purposes of this calculation ~~D~~daily Vvolumes will be filtered using the same steps used when calculating the Maximum Daily Volume determined using the steps (2) – (4) in the methodology set out in 10A.4.2 for calculating the Daily Volume Limit.
- ~~(3) Any measurement that is at, or below, 0 m<sup>3</sup> will be removed.~~
- ~~(4) In Any month where the Actual Monthly vVolume taken exceeds the ~~a~~Authorised ~~or calculated~~ Monthly vVolume by less than the margin of error on the water meter, the Actual Monthly Volume is rounded adjusted down to the ~~consented~~ Authorised Monthly vVolume.~~
- ~~(4) The 'Monthly Volume Limit' will be determined as the maximum value after steps (1) to (3) above have been completed.~~
- ~~(5) Any month where the volume taken exceeds the authorised or calculated volume by more than the margin of error of the water meter will be removed from the data and not considered further. This ensures that the following are excluded from any calculations:~~
- ~~a) overtaking outside of existing authorised limits, and~~
  - ~~b) errors caused by faulty equipment, and~~
  - ~~c) overtaking caused by natural events such as floods.~~
- ~~(6) The margin of error to be applied to any calculation will be either 5% or 10% depending on:~~
- ~~a) the margin of error specified in any consent or permit being replaced, or~~
  - ~~b) the results of the last verification presented to the Otago Regional Council, or~~
  - ~~c) the margin of error specified by the meter's manufacturer.~~
- ~~(7) The maximum 'Monthly Volume' taken in each water year will be summed across the hydrological years analysed and divided by the number of hydrological years analysed.~~

### 10A.4.4 Methodology for calculating Annual Volume Limit (m<sup>3</sup>)

The 'Annual Volume Limit' shall be determined by calculating the maximum annual volume taken in all water years (1 July to 30 June) up until 30 June

2020 for which water meter data is available, using the following methodology average of the actual volumes taken each year.

### **Methodology**

- (1) Where a consent or permit being replaced does not include an ‘Annual Volume Limit’ the ~~a~~Authorised Annual ~~v~~Volume will be calculated based on one of the following formulae. The formula used will be whichever one produces the lower calculated Authorised Annual Volume~~Limit~~;

~~Authorised Annual Limit Volume~~  $m^3 = (\text{Consent Daily Volume or Calculated Daily Volume}) \times \text{Authorised Daily Volume (as determined under Step (1) in the methodology in Schedule 10A.4.2)} \times 365.25$ ;

~~Authorised Annual Limit Volume~~  $m^3 = (\text{Consented Monthly Volume}) \times (\text{Months where water can be taken})$

Where the consent or permit being replaced specifies the months during which water can be taken, a count of those months will be used. Where the consent or permit being replaced does not specify the months during which water can be used the number used will be 12.

- (2) Actual Annual Volumes will be calculated based on the sum of the ~~assessed~~ ~~D~~daily ~~V~~volumes taken in each water year. For the purposes of this calculation ~~D~~daily ~~V~~volumes will be determined using the steps (2) – (4) in the methodology set out in 10A.4.2 for calculating the Daily Volume Limit ~~filtered using the same steps used when calculating the Maximum Daily Volume.~~
- (3) ~~Any measurement that is at or below 0 m<sup>3</sup> will be removed.~~
- (4) ~~In Any year that where the Actual Annual Volume taken exceeds the Authorised or calculated Annual vVolume, the Actual Annual Volume is rounded adjusted down to the Authorised Annual vVolume.~~
- (4) The ‘Annual Volume Limit’ will be determined as the maximum value after steps (1) to (3) above have been completed.
- (4) ~~Any year that exceeds the authorised or calculated volume is rounded down to the authorised volume.~~
- (5) ~~The ‘Annual Volume’ taken in each water year will then be summed across the hydrological years analysed and divided by the number of hydrological years analysed.~~

### **Schedule 10A.5.1 Hydro-electricity generation infrastructure**

<u>Beaumont Race</u>	<i>Beaumont</i> <u>NZTM 2000 E1340136 N4930132</u> <i>Little Beaumont River</i> <u>NZTM 2000 E1339935 N4929937</u>
<u>Shepherds Race</u>	<u>NZTM 2000 E1362725 N4911571</u>
<u>Crystals Race</u>	<i>Crystals</i> <u>NZTM 2000 E1367994 N4913862</u> <i>Little Crystals</i> <u>NZTM 2000 E1367902 N4913442</u>
<u>Black Rock Race</u>	<u>NZTM 2000 E1358613 N4926962</u>

**Table of minor and consequential changes**

<b>Plan Provision</b>	<b>Detail of proposed change</b>								
Page numbers	Update page numbers.								
Footers	Change footer to read “Regional Plan: Water for Otago (Updated to <date to be inserted>)”.								
Title page	Change the date to read “Updated to <date to be inserted>”.								
ISBN number	Obtain new ISBN numbers for Regional Plan: Water for Otago.								
Chronicle of key events	<p>Add the following to the end of table:</p> <table border="1"> <thead> <tr> <th><b>Key event</b></th> <th><b>Date notified</b></th> <th><b>Date decisions released</b></th> <th><b>Date operative</b></th> </tr> </thead> <tbody> <tr> <td>Plan Change 7 (Water Permits) to the Regional Plan: Water</td> <td>&lt;Date to be inserted&gt;</td> <td>&lt;Date to be inserted&gt;</td> <td>&lt;Date to be inserted&gt;</td> </tr> </tbody> </table>	<b>Key event</b>	<b>Date notified</b>	<b>Date decisions released</b>	<b>Date operative</b>	Plan Change 7 (Water Permits) to the Regional Plan: Water	<Date to be inserted>	<Date to be inserted>	<Date to be inserted>
<b>Key event</b>	<b>Date notified</b>	<b>Date decisions released</b>	<b>Date operative</b>						
Plan Change 7 (Water Permits) to the Regional Plan: Water	<Date to be inserted>	<Date to be inserted>	<Date to be inserted>						
Section 1.4	<p>Proposed Plan Change 7 (Water Permits) provides an interim regulatory framework for the assessment of applications to replace Deemed Permits expiring in 2021 and other water permits expiring prior to 31 December 2025, the date by which the new land and water Regional Plan is expected to be operative.</p> <p><u>The Plan Change also has a new policy on duration that applies to all other permits to take and use water.</u></p> <p>It was notified on ..., and a total of ... submissions and ... further submissions were received. Following the hearing, decisions on submissions received were released on ... . Plan Change 7 was made operative on ... .</p>								