

## Technical guidance note 1: Deemed/water permit replacement applications

The replacement of a deemed permit with a resource consent often requires additional resource consent requirements or information be provided in relation to the water conveyance and storage infrastructure.

This guidance note provides a technical overview of some of the necessary information that will need to be provided with a resource consent application to replace a deemed permit where the take relies on the conveyance and storage of water.

The purpose of the guidance is to assist consultants and resource consent applicants in identifying the associated information and/or additional applications that may be required so that your application to replace a deemed permit is complete.

Applications to replace deemed permits are assessed against the rules in the Regional Plan: Water for Otago (“**RPW**”). Activities associated with the deemed permit may trigger the need for a water permit for diversion and water permits and/or land use consents for dams and structures, and additional information or consent requirements for non-consumptive takes (such as by-wash).

This guidance will assist with:

- Understanding primary and supplementary allocation;
- Determining the point of take for your water take;
- Assessing the rules and requirements when taking from water races, reservoirs and dams;
- Making sure you have surety of your water supply;
- Determining if your application may also require a water permit and/or a land use consent for storage and damming of water;
- Understanding how by-wash will be considered and the information required
- Assessing historic water use;
- Assessing efficiency of water use;
- Assessing of residual flows.
- Understanding what is the existing environment

Please note that this is not a comprehensive guide to all information needed to replace a deemed permit, and additional information on applying to replace your deemed permit can be found on the ORC website at:

<https://www.orc.govt.nz/consents/transitions-from-deemed-permit-to-rma-consent>

We also recommend that you make a pre-application to us so we can review your draft application. We will run the draft application through a pre-application check to provide you with feedback on any areas that require more information for your final application. This is charged to you at our standard hourly processing rate.

We understand that applying for a water permit can be complex, and ORC is here to help. You can call us on 0800 474 082 or email us at [deemedpermits@orc.govt.nz](mailto:deemedpermits@orc.govt.nz).

## Primary and Supplementary Allocation

Primary allocation is the amount of water in the water body that can be allocated for taking and using by resource consents (in litres per second). Deemed Permit are often considered to be taking water as primary allocation. Applications to replace deemed permits (and many water permits) currently require resource consent under the relevant primary allocation rule<sup>1</sup> in the operative RPW and Rule 10A.3.1.1 or Rule 10A.3.2.1 of Plan Change 7 to the RPW. Policy 6.4.2 and the associated explanation in the RPW describe primary allocation and how it is calculated.

Applications to replace deemed permits/water permits may also seek additional water as supplementary allocation or further supplementary allocation. This enables water to be taken when flows are higher and additional water is available. Policies 6.4.9 and 6.4.10 in the RPW describe supplementary allocation. Method 15.8.1A.1 explains how supplementary allocation is determined. Supplementary allocation may be appropriate for some current primary allocation takes where water is typically taken at higher flows only.

Where stored water is taken (i.e. water is released from a dam for subsequent taking) or water is delivered to a river as part of the conveyance network and abstracted from the river at a downstream location then the take is currently classified as an augmented take under the RPW and is not considered as part of primary allocation. Augmented takes are provided for by Rule 12.1.4.1 of the RPW as a restricted discretionary activity.

Consideration should be given to whether all of a take (rate of take) is primary allocation or whether it is more appropriate that parts of the take are considered supplementary allocation or augmented water when a replacement application is being made.

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<sup>1</sup> Unless exempt from primary allocation under Policy 6.4.1 or classified as supplementary allocation in accordance with Policy 6.4.2AA

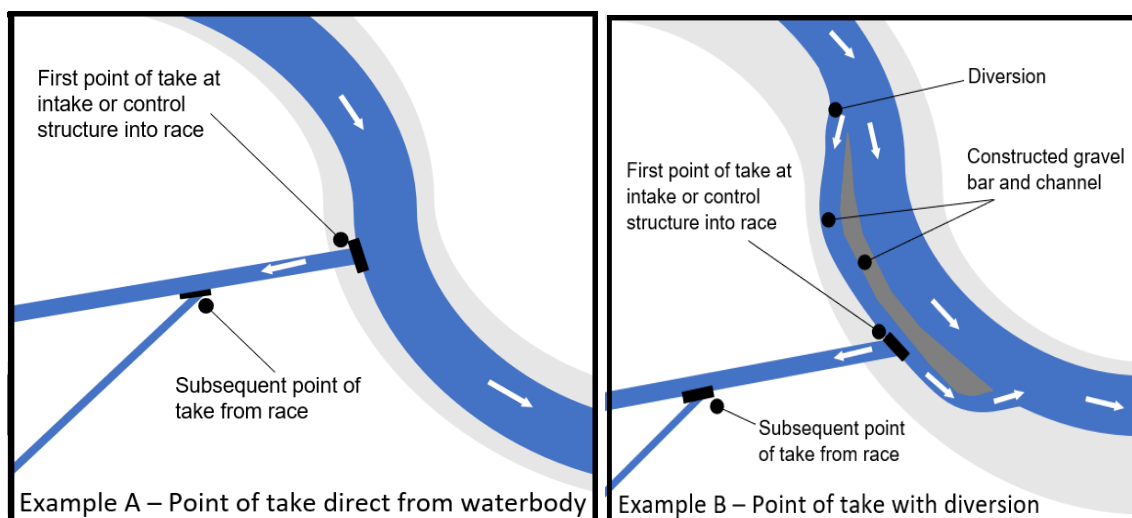
## Determining the Point of Take

Deemed permits often have complex intake set-ups. These may include the source waterbody (the river the water is taken from) being diverted or channelled within or outside of the natural bed. Also common are by-wash overflows and/or weir/dam structures within or outside the bed.

The ability to control the water into a channel is used to determine where the point of take is. The point of take is where water is taken out of the source waterbody by a control mechanism such as a gate, control structure or pump.

Where there is no control structure at the point where water is taken from the source waterbody, you will need to review the diversion rules in Section 12.3 of the RPW. Consent may be required for a permanent or temporary diversion. The take point would then be from the diversion channel where control of the take is held.

The diagram below will assist in determining the point of take:



The Resource Management (Measuring and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020 require measuring devices to be located at the point of take. If your water measuring device will not be at the point of take, you will need to apply for a Water Metering Exemption (“WEX”).

More information about applying for a WEX is available here:

<https://www.orc.govt.nz/consents/water-metering-and-measuring>

## Takes from Water Races, Reservoirs and Dams

The taking of water at any point, whether within a water body or a race or reservoir, requires resource consent under the RMA unless permitted by a regional rule. If you operate an irrigation scheme, your application should assess all activities for the take and use of water to enable the take of water from the water body into any storage or conveyance systems such as races, reservoirs or weirs/dams, along with the subsequent take and use of water from the storage or conveyance system.

Takes from races, reservoirs or dams that relate to a take from a water body are required to be considered as part of the take and use application and assessed in the application unless the activity is permitted by Rule 12.1.2.3 (takes from artificial lakes). Applications will need to include and assess the 'parent' take from the water body (e.g. river), and any subsequent takes from a water race, reservoir, or dam in the one application. These retakes will be considered within the envelope of the rule(s) that apply to the 'parent' take(s) and any retakes will be included on the same consent as the 'parent' take.

All points of take from a river/ water body will need to include a map reference and plan of the location. Ideally the locations of any retakes from dams/water races are also identified by a map reference and plan. However, for large scheme applications a scheme map that shows the location of all the distribution and storage infrastructure and identifies the general location of the retakes will satisfy information requirements.

In addition, the application will need to include consents for any 'augmented takes'. Augmented takes are takes from a river or lake where water has been delivered to that lake or river for the purpose of subsequent taking. This is where a river, most commonly, is used as part of the conveyance system. Augmented takes are provided for by Rule 12.1.4.1 of the RPW as a restricted discretionary activity. These are separate to retakes from races or reservoirs, which are not specifically provided for by this rule.

## Damming and Storage of Water

Resource consent (water permit) is required where the damming of water does not comply with Permitted Activity Rule 12.3.2.1 of the RPW. This applies to the damming of water both in a natural water body and outside of a natural water body (i.e. on land).

Damming includes holding water in storage/detention ponds and reservoirs and other structures - both within and outside water bodies and races. This applies to both new and existing damming which does not have a current resource consent in place.

### Existing dams

- Unless permitted by Rule 12.3.2.1, **a water permit** is required for the damming of water in an existing dam.

- Existing dam structures within a natural water body may also require **land use consent** under the rules in Chapter 13 of the RPW for any repairs, alterations, maintenance, extension, replacement or reconstruction. For the use of the structure to be permitted Rule 13.1.1.1 needs to be complied with.
- Existing dam structures located outside of a natural waterbody do not require land use consent from ORC. Provided these structures were lawfully established, they form part of the environment.

## New dams

- Unless permitted by Rule 12.3.2.1, a **water permit** is required for any new damming of water.
- New dam or pond structures located outside of a natural watercourse do not require land use consent from ORC. However, you should confirm any resource consent requirements with your District Council in case district land use consent is needed.
- Unless permitted by Rule 13.2.1.3, a **land use consent** is required for a new dam structure within a bed of any river or lake. Such structures are discretionary activities under Rule 13.2.3.1 of the RPW. Consent may also be required for alteration of the bed/bed disturbance if relevant permitted activity Rule 13.5.1.1 or 13.5.1.3 cannot be complied. This activity would be a discretionary activity under Rule 13.5.3.1.

## Other consents that may be required for dams

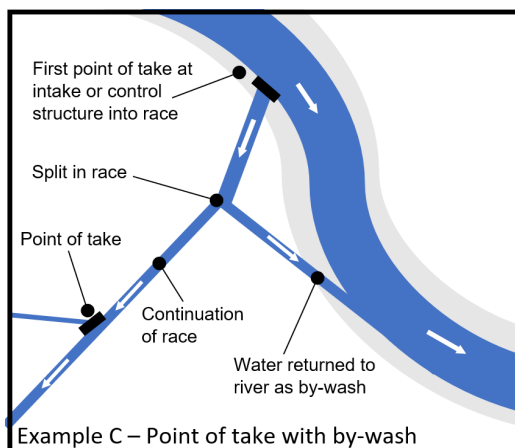
- If your application includes the construction of a new dam in the bed of a natural waterbody, a **water permit** may be required to divert water if flows are to be diverted during dam construction and permitted activity Rule 12.3.2.3 cannot be met.
- A **discharge permit** may also be required for the discharge of contaminants during construction (e.g. cement).
- A **discharge permit** for the discharge of water from a dam (e.g. spillway discharge) may be required if permitted activity Rule 12.B.1.10 cannot be met for 'large' dams (dams that require a consent for the original structure placement) or permitted activity Rules 12.C.1.1 **and** 12.C.1.2 for 'small' dams.
- Separate discretionary resource consent for a **weir** may also be required under Regulation 73 of the NESFW. Under these standards, a weir means an open-topped structure across the full width of any river or connected area that—
  - (a) alters the water level and the flow characteristics of the water; and
  - (b) allows water to flow passively through or over the top.

- **Large** dams will also require Building Consents. A large dam has a height of 4 or more metres **and** holds more than 20,000 m<sup>3</sup>. More information is provided on the building consents page: <https://www.orc.govt.nz/consents/dam-building-consents>.

All resource consent applications associated with the damming of water and the establishment of any dam structures that relate to the take and use of the water will need to be applied for with your application. Application forms are available for this on the Council's website.

## By-Wash and Discharges

By-wash is excess water that is taken at the point of take, normally to enable the point of take and conveyance infrastructure (such as a race) to operate. By-wash is typically discharged back into a water body downstream of the point of take. By-wash may also be discharged to other water bodies to manage high flows/relieve pressure on the race system and prevent race blowout. Refer to Example C below.



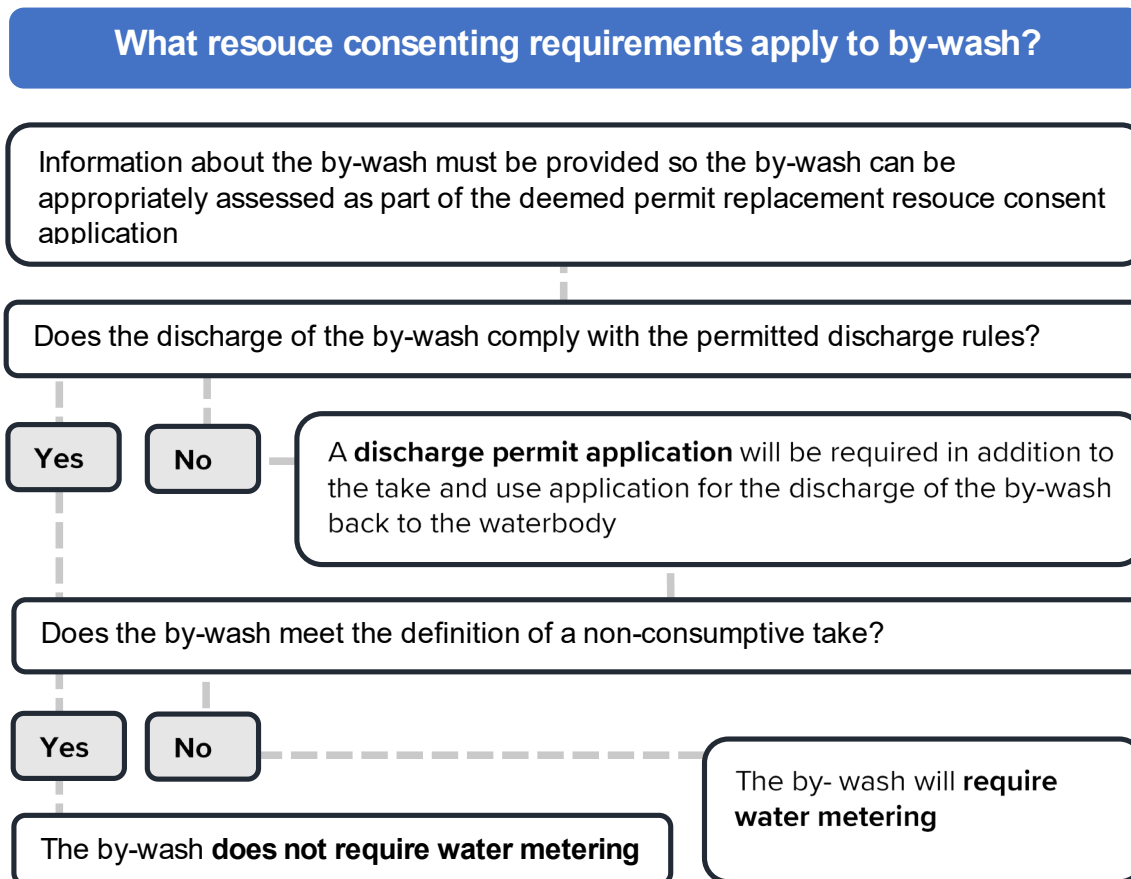
The taking of water for by-wash requires resource consent and will be considered as part of the resource consent application for the parent take. The resource consent application will need to provide information about why the by-wash is required. This will need to include details of the by-wash purpose and quantity and how and when the by-wash occurs.

Where the by-wash is discharged back to a waterbody, this needs to be assessed against the permitted activity rules in Section 12.C to confirm if the discharge of the by-wash is permitted or if you will also need to apply for a discharge permit with your application.

Return of the by-wash to a waterbody upstream of a flow metering device is the preferred approach where a by-wash is necessary. However, return of the by-wash downstream is also acceptable, where appropriate.

If the by-wash is '**non-consumptive**', metering will not be required under the Resource Management (Measurement and Reporting of Water Takes Regulations) 2010 and

Amendment Regulations 2020. The next section below on non-consumptive takes will help you in determining if your by-wash is 'non-consumptive'. If the by-wash is consumptive there will need to be primary/supplementary allocation available for this purpose of take<sup>2</sup>.



We recommend you discuss your proposed by-wash scenario with ORC prior to lodging resource consent.

## Non-Consumptive Takes

In order for a take to be non-consumptive (such as by-wash or for electricity generation), the take needs to meet the following definition:

*A take is non-consumptive when:*

- (a) *The same amount of water is returned to the same water body at or near the location from which it was taken; and*

<sup>2</sup> Unless exempt from primary allocation under Policy 6.4.2.

(b) *There is no significant delay between the taking and the returning of the water*<sup>3</sup>.

When considering *the same amount of water is returned to the same water body at or near the location from which it was taken*, consider:

- Is the water being taken from and returned to the same water body?
- Is there potential for any losses of water between the take and the return of the water (i.e. is the water piped to the discharge point, is it via a race, is the pond lined, is there potential for evaporative losses, leaching losses, overflow losses, etc)?
- What is the measured distance between the take and return of the water? Is this location considered to be near the point of take?

When considering *whether there is no significant delay between the taking and the returning of the water*, consider:

- Can the time between the taking and return of water be quantified (is this minutes, hours, days or weeks)?
- Is the delay significant?

Your application should demonstrate how the non-consumptive elements of the application meets the non-consumptive take definition.

This will also assist you with assessing the effects of the by-wash.

## Historic Water Use

The application will need to review the data collected by current and previous measuring devices for the deemed permit or water permit and compare this with the rates and volumes (monthly and seasonal) applied for. In most catchments, Council will not be able to grant more water than has been historically taken as primary allocation. This does not mean that the maximum rate of take or volumes taken once or twice over the measuring period will be considered reflective of historic use. The historic use data will need to be analysed to determine the pattern of taking. The methodology used to analyse the data will be the following:

- i. For applications lodged prior to Plan Change 7 becoming operative/beyond legal challenge, a 90<sup>th</sup> and 95<sup>th</sup> percentile analysis of the data and an assessment in accordance with the methodology outlined in Schedule 10A.4 of Plan Change 7 will be undertaken.

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<sup>3</sup> Definition is from the Resource Management (Measurement and Reporting of Water Takes Regulations) 2010 and the RPW.



- ii. For applications lodged once Plan Change 7 is operative and/or the rules are beyond legal challenge, the methodology in Schedule 10A.4 (or equivalent).

A joint witness statement between Council and the applicant was prepared for Application RM19.281. This agreed methodology related to including or excluding exceedences of take within the data set. Council's practice is to exclude exceedences over the margin of error for the measuring device (this will be +/- 5% or +/- 10% based on the device) and in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020 as these takes represent non-compliance with the current permit. It is noted that the agreed methodology used in the joint witness statement was specific to that application and the confined set of circumstances associated with that application. The above approach will be used in the first instance. Where an alternative methodology is used, the application should outline this methodology and the specific reasons for it being used.

Guidance on using Schedule 10A. 4 can be found here:

<https://yoursay.orc.govt.nz/54485/widgets/283366/documents/163563>

## Efficient Water Use

The application will need to consider what the water will be used for and whether the quantities of water applied for are no more than that required for those purposes of use. Guidance is provided in Form 4 for what Council considers to be efficient water quantities for stock water and domestic purposes.

For irrigation, the Council uses guidelines prepared by Aqualinc to assess efficiency for different crops. This takes into consideration the local climate and soils within the irrigation area. A copy of the guidelines can be found here:

<https://www.orc.govt.nz/media/4499/aqualinc-irrigation-guidelines-2015.pdf>

Aqualinc provides recommended seasonal volumes based on an average year; a one and two-year drought (80th percentile); a one in ten-year drought (90th percentile); and a maximum situation. For Otago it is considered that a one in ten-year drought or 90<sup>th</sup> percentile is the most appropriate when considering efficient water use. This aligns with the approach used by other regional councils. The efficiency of the application method also needs to be considered and proposals for upgrade outlined where conversion to more efficient application methods are proposed during the term of the consent.

For frost fighting, the Council does not have published recommendations for water requirements for frost protection in the Otago region and uses the recommendations by Environment Bay of Plenty (EBOP) of 2.5 to 3.0 mm of water per hour per hectare (usually applied for up to 10 hours), up to a maximum of 30 days per year. The number of frost fighting events will depend on the location and frost climate data. It is recognised that up to 4 mm per hour may be appropriate in Central Otago due to the severity of frosts. If site specific information and data can be provided that suggests that the above

recommendations need to be reduced or increased at a specific location then this evidence needs to be provided with the application.

The application also needs to consider the efficiency of the distribution and storage infrastructure and whether these are in accordance with best practice. The potential for leakage and losses will need to be assessed and any proposals for upgrades to this infrastructure outlined in the application.

## Residual Flows

Residual flows are the flows left in a water body below the point of take to maintain the natural character and ecosystem values of the water body. The instream values, flow hydrology and natural character of the water body are taken into consideration when determining whether a residual flow is necessary.

The Council uses matrix approaches (example below) to determine the risk of adverse effects caused by water takes. A residual flow recommendation is made by the Council's technical advisors based on the degree of hydrological alteration and significance of instream values. This recommendation may be to maintain connectivity or to maintain a specific residual flow that is percentage of 7-day mean annual low flow (MALF).

**Table 1: Example of a matrix approach for residual flows**

Degree of hydrological alteration	Significance of instream values		
	Low	Moderate	High
Low	Maintain connectivity Minimum water depth*	Maintain connectivity Minimum water depth*	60-80% of MALF
Moderate	Maintain connectivity Minimum water depth*	60-80% of MALF	70-90% of MALF
High	60-80% of MALF	70-90% of MALF	70-90% of MALF

Specific conditions imposed will be dependent on the size of the residual flow recommended and the ability for the residual flow to be monitored.

For smaller residual flows, typically where a residual flow would be less than 20 L/s, a continuous connected residual flow may be required to be maintained from the point of take to a defined point downstream.

For residual flows which require more than just connectivity, but do not require regular reporting via a temperature logger, the installation and maintenance of a flow gauge is likely to be appropriate.

For larger residual flows that require a specific flow in litres per second to be maintained in the watercourse below the point of take, the installation and maintenance of a temperature logger at a critical riffle location may be recommended with data provided to Council on a regular basis.

In some specific cases, a residual flow may also be able to be measured by measuring the relationship with a flow recorder downstream or outside the catchment and using a flow level on that recorder to trigger the suspension, or a telemetered flow recorder may be used where a larger water user group is established.

An application should give consideration as to whether a residual flow is required and provide reasons for the residual flow proposed including details on how the residual flow is proposed to be monitored.

### Need more information?

If you have questions about applying to replace your deemed permit you can call us on 0800 474 082 or email us at [deemedpermits@orc.govt.nz](mailto:deemedpermits@orc.govt.nz).

For more general information please email us as [public.enquiries@orc.govt.nz](mailto:public.enquiries@orc.govt.nz) or refer to the Council's website [www.orc.govt.nz](http://www.orc.govt.nz)