Draft Land and Water Regional Plan

Region-wide proposed new rules and regulations

Enviromental Flows and Limits (Water Quantity)

Otago Regional Council

Recent content updates:

26 September 2023:
- Added information about the 7-day mean annual low flow and default minimum flows and take limits for rivers
- Clarified the definition of landholding for take limits for aquifers
- Added information about the approach for determining stream depletion where groundwater and surface water are connected
- Clarified the definition of paper allocation
- Clarified the definition of “stacking” of permitted water takes.

The Environmental Flows, Levels and Limits chapter of the draft Land and Water Regional Plan manages:

- The setting of water quantity limits such as environmental flows and levels and take limits for all freshwater bodies in Otago

All takes and uses of freshwater, including policy direction on:
- Community water supply
- Hydro-electric generation activities
- Temporary takes, including dewatering
- Efficiency of water take, conveyance and use
- Mixing of water and use of rivers for conveyance
- Takes for storage
- Taking from artificial water bodies
- Non-consumptive takes
- Group management of take and use activities
- Transfers of water permits
- Measuring of takes
- Consent duration

Overview and key changes

The table below provides a high-level comparison of the existing Water Plan and the draft Environmental Flows, Levels and Limits chapter and highlights key changes from the Water Plan. The Freshwater Management Unit (FMU) chapter summaries contain the specific environmental flows and levels and limits for water bodies contained within each FMU.

The level of impact of the changes from the existing plan to the draft LWRP will vary across FMU and rohe (areas) in Otago depending on the circumstances of allocation and water uses in different water bodies.

Environmental Flows, Levels and Limits chapter of draft LWRP	Existing plan
River catchments	

Environmental flows and take limits set for all rivers according to the following:
• Rivers with low hydrological modification will have default minimum flows and take limits based on a percentage of the 7-day mean annual low flow (MALF). This regime applies to the vast majority of rivers in Otago. The 7-day MALF is a flow statistic that provides an indication of how low the flow gets in a typical year. The lowest flow for each year is averaged across recorded years to estimate the MALF (Mean Annual Low Flow). Flows were averaged across 7-days before calculating the minimum for each year.
• Default minimum flows and take limits are the following:
  • a take limit of 20% of 7-day MALF and minimum flow of 90% of 7-day MALF for a river catchment with a mean flow of 5 m3/s or less; and
  • a take limit of 30% of 7-day MALF and a minimum flow of 80% of 7-day MALF for catchments with a mean flow of greater than 5 m3/s.
• Rivers with higher hydrological modification will have bespoke take limits and minimum flows in the plan, based on site specific information for those catchments.
• For some rivers, often characterised by low to moderate hydrological modification and a small number of consented takes, interim take limits and minimum flows will be set according to the default method above. These will be implemented through the resource consent replacement process. However, prior to this resource consent replacement process taking place Council will assess whether there is a need to set bespoke minimum flows and take limits for these rivers through a plan change process.
Better policy direction around the setting of site-specific environmental flow conditions on consents (in the current planning framework referred to as 'residual flows') to protect locally present or downstream values.
	• The Water Plan only has minimum flows for a limited number of catchments, and the approach for determining take limits is complex.
	• Most take limits and environmental flows have not been determined in accordance with the requirements of the NPS-FM and are not consistent with Te Mana o te Wai.
	• The Water Plan only allows for the consideration of a narrow set of values (ecology and natural character) when setting 'residual flows' at the point of take.
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Lakes

New consented takes, diversions, damming or discharges of water from natural lakes and their upper catchment will be a prohibited activity.

Takes from lakes will generally be included within a single take limit that applies to the lake as well as the river catchment that the lake is part of. This is consistent with a holistic and integrated management approach (ki uta ki tai - mountains to sea).

The exception is lakes where a specific take limit and/or minimum level has been set such as some instream artificial lakes (e.g. Lakes Dunstan, Roxburgh, Onslow, Mahinerangi), and two natural lakes (Whakatipu and Wānaka), and natural lakes with an upper catchment that is highly modified through hydro-electricity generation, for example Lake Waipōuri.

- The Water Plan does not set take limits for lakes in Otago.
- The Water Plan only sets environmental levels for one lake (Lake Tuakitoto), although there have been some water levels set for some lakes (e.g., Lakes Hawea, Dunstan and Roxburgh) through consent processes.

Groundwater

Environmental levels and take limits are set for taking water from different types of aquifers:

- Some mapped aquifers, for which robust and up-to-date technical information is available will have bespoke take limits.
- Other mapped aquifers will have a default take limit based on 35% of MAR.
- For aquifers not identified/mapped (such as fractured rock aquifers), the take limit will be 5% of the estimated annual average rainfall accumulation on the relevant landholding. Landholding in this context means 1 or more parcels of land (whether or not they are contiguous) that are managed as a single operation.
- Manage the connection between groundwater and surface water by:
- Removing the “100 metre rule” in the Water Plan
- Providing a clear method for determining stream depletion that is consistent with best practice in other regions. Under the proposed approach applicants will be required to calculate the proportion of the take that constitutes water drawn from nearby surface water bodies. Where a high proportion of pumped groundwater comes from surface water (i.e. high “stream depletion”) the groundwater take will be allocated from within the take limit that applies to the surface water body. This new approach will be based on the actual calculated effect of the groundwater take on surface water flows, rather than on the calculated distance from the stream.

- **The Water Plan sets take limits for aquifers that include:**
- tailored limits and restriction levels for a small number of aquifers; and
- default limits for other aquifers based on 50% of the Mean Annual Recharge (MAR). The mean annual recharge is a statistical value based on the past climate, aquifer hydrology, soil properties, and other factors with direct influence over groundwater recharge.
- **The Water Plan manages the connection between rivers, lakes and aquifers through:**
- a complex method of determining the stream depletion effects from groundwater takes; and
- arbitrary rules where groundwater takes located within 100 metres of a river or lake are 100% allocated as surface water (elsewhere on this page referred to as the “100 metre rule”).

Avoiding over-allocation	
• Policy direction will be to avoid taking of water in excess of take limits. • Prohibited activity rule for all new takes in excess of take limits, which is consistent with the requirements of the NPSFM.	• The Water Plan does not recognise over-allocation of surface water but adjusts take limits in highly allocated catchments to reflect consented takes. • The Water Plan prohibits new surface water takes from fully allocated catchments but does not prohibit new takes from fully allocated or over-allocated aquifers. Highly allocated catchments are catchments where the combined consented allocation exceeds the specified take limit in the operative Water Plan or the default take limit of 50% of 7-day MALF applied in that Plan.
Phasing out over-allocation	
Key changes: **In region-wide provisions, two stage approach to phasing out existing over-allocation will include policy direction and mandatory rule conditions for the replacement of consents in over-allocated water bodies:** • Stage 1: Upon reconsenting of existing takes, remove paper allocation (paper allocation is any quantity of water that is allocated under a resource consent but that exceeds the actual (recorded) rate of take or volume of water taken by the consent holder), limit the rate of take/volume to the lesser of historic take or the rate/volume required based on guidelines for efficient use. Short duration for Stage 1 replacement consents. The use of short-term consents aligns with the direction set in the Natural and Built Environment Act (NBEA) that will be phased in over the coming years. • Stage 2 (where required): Proportional reductions for the catchment where any reductions in allocation under stage 1 prove insufficient to meet the default take limits in the LWRP, with ability to consider an alternative environmental flow and level regime for those currently subject to default regimes. **River catchments with bespoke take limits may have different requirements under the 2-staged approach:**	The Water Plan has sinking lid policies to reduce allocation that partly rely on voluntary actions and is not likely to reduce the consented allocation to environmentally sustainable levels.

Phasing out over-allocation	
• Stage 1 will seek to reduce water use where possible by requiring efficient use and removing paper allocation. The plan will also require all water users to work together to develop plans for a catchment-wide approach for achieving the environmental flows, and for phasing out/ avoiding over-allocation within the proposed Otago Regional Policy Statement (pORPS) timeframes for achieving the long-term visions for different FMUs and rohe. • Stage 2 will see the delivery and execution of the plans set up in Stage 1. However, if by the end of Stage 1 no plans have been developed and agreed upon among consent holders, proportional reductions will be required under Stage 2	No directive policy guidance for specific activities
Different types of freshwater takes	
• Clear rules and policies for managing the effects from different types of takes. This includes providing pathways for non-consumptive takes, secondary takes (previously known as augmented takes) and takes from artificial water bodies (previously known as retakes). • Policies and rules that provide for the consented taking of water at higher flows (for storage) and which consider ecological requirements to ensure water bodies are not 'flat-lined' or their ecological processes are not impeded.	• The Water Plan provides some policy direction for augmented takes and identifies non-consumptive takes by definition but does not have a clear framework for managing different types of takes. • The Water Plan does not set any restriction on the taking of water above mean flow.
Specific activities	
Provide overarching policy direction to manage: • Compliance with environmental flows and levels • Efficiency of take, conveyance and use • Mixing of water **Provide policy guidance for specific activities, including:** • Collective management (irrigation schemes and water user groups) • Community supplies • Hydro-electricity generation • Temporary takes • Non-consumptive takes • Transfers from one site to another	No directive policy guidance for specific activities

Efficiency considerations	
• Clear policy direction to ensure all water storage, conveyance, take and use is reasonable and efficient for its intended use. • **Policies and rules that that require and determine the reasonable and efficient rates of take and volumes for common uses including:** • Animal drinking water • Domestic supply • Dairy shed supply • Frost fighting • Irrigation • Policy direction to encourage takes from resilient sources (main stems of river catchments, lakes and groundwater where further allocation remains available), in preference to takes from tributaries and over-allocated rivers.	Limited policy direction on how to consider efficiency when assessing an application for a water take
Consideration of applications	

• Set clear policy direction on considerations for take and use of water and transfers.
• In addition to the Water Metering Regulations, require metering of small, consented takes, discharges from hydro-electric schemes and 'residual' flows.
• Consent durations will be determined considering the following:
  • Timeframes for achieving the visions in the proposed Regional Policy Statement
  • The allocation status of the catchment and any degradation (including with respect to the water quality of the catchment) that may exist
  • Any FMU or rohe expiry dates that may apply (proposed FMU and rohe consent expiry dates are in the area-specific summary documents).
• Maximum durations of 10 years are proposed, with some exceptions allowed for (e.g. water takes associated with regionally or nationally significant infrastructure)
	• Limited guidance on how applications are to be considered, minimum consent requirements, measuring requirements, lapse periods.
	• The Water Plan has a transfer policy that provides limited guidance for managing of site-to-site transfers and is open to interpretation. There are no specific rules for transfers.
	• A consent duration policy that led to an expectation of long-term (35 year) consent durations

Rule framework	

• **Permitted activity pathways for:**
  • Small takes for domestic supply and stock water only (not for commercial or economic uses)
  • Temporary takes, including dewatering and aquifer testing
  • Takes from artificial sources (e.g., water races and storage reservoirs)
  • Takes into instream dams to enable transition to a consent framework
• Permitted activity takes are scaled based on the size of the water body.
• **Permitted activity conditions include:**
  • Restriction on taking when minimum flow or minimum level has been reached, except for reasonable domestic use;
  • fish are prevented from entering the intake
• Direction around avoiding the "stacking" of permitted water takes. The stacking of water takes involves a person taking from multiple locations on the same waterbody and on the same property via multiple pathways such as under s 14(3)(b) of the Resource Management Act 1991 and the permitted activity and consenting framework in the Water Plan.
• A clearer and simple rule framework for all other activities (taking from surface water, lakes and groundwater) with enabling consent pathways where takes are within take limits and comply with environmental flows and levels, including a specific consent pathway for community water supply and site to site transfers.
	• Permissive permitted activity framework that can enable multiple taking where there are different sources (groundwater and surface water) and provisions that apply.
	• Complex framework with distinctions in considerations between the different rules not obvious – there are many restricted discretionary activities with wide matters of restriction.
	• New temporary framework of short-term consents for replacement water permits introduced in 2020 (PC 7).
	• No rule framework for transfers – consents are processed under s136 of the Resource Management Act 1991