

Practice note: Consents for offline dams and reservoirs

Damming of water is controlled by s14 of the RMA and is prohibited unless expressly allowed by a National Environmental Standard (NES), regional rule or resource consent. Associated activities such as diversions, takes, discharges and uses of water are similarly regulated. Damming of water in Otago is managed by the Regional Plan: Water for Otago (RPW); likewise, associated activities. A reservoir/ offline dam needs to be assessed under our RPW.

An offline dam or reservoir is where there is damming of water on land i.e. the dam is located on land outside of a river or waterbody. These may include turkey-nest dams, ponds, reservoirs, storage dams but is not limited to these. Advice regarding consent requirements for instream dams can be found at the beginning of Application Form 2. However, the below section on the Building Act and Dam Safety are relevant for instream dams.

New damming activity

If people are constructing a new dam, then they may need a resource consent under the RPW for the damming of the water. This is because the damming of water is not limited to water in rivers or catchment runoff and also includes the damming of water in reservoirs. Under the operative RPW where the permitted activity rules cannot be met for this activity, a **water permit** is required for this damming. If people do not meet the permitted criteria in Rule 12.3.2.1 (shown below) the damming of water is a discretionary activity under Rule 12.3.2.1.

12.3.2 Permitted activities: No resource consent required 12.3.2.1

Unless prohibited by Rules 12.3.1.1 to 12.3.1.4, the damming or diversion of water is a permitted activity, providing:

- a) *The size of the catchment upstream of the dam, weir or diversion is no more than 50 hectares in area; and*
- b) *In the case of damming, the water immediately upstream of the dam is no more than 3 metres deep, and the volume of water stored by the dam is no more than 20,000 cubic metres; and*
- c) *In the case of diversion, the water is conveyed from one part of any lake or river, or its tributary, to another part of the same lake, river or tributary; and*
- d) *No lawful take of water is adversely affected as a result of the damming or diversion; and*
- e) *Any damming or diversion within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and*
- f) *There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and*
- g) *There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and*

- h) *The damming or diversion does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and*
- i) *The damming or diversion is not within the Waitaki catchment.*

If the damming meets Rule 12.3.2.1, then the subsequent water take will also be permitted under Rule 12.1.2.3 (artificial lake).

If the damming cannot comply with the above permitted activity rule (i.e. the volume of the reservoir is over 20,000 cubic metres) a resource consent will be required for the damming of water under discretionary Rule 12.3.4.1. A water take permit could also be required unless the take is less than permitted volumes.

Factors to consider regarding your application include:

- Volume of water;
- Consequences of failure;
- Fault lines/landslide risk etc.
- Nature, age and condition; and
- Dam may hold contaminants rather than water.

Plan Change 7 and Water Permits to Dam

A **new** water permit to dam water would be considered under the operative RPW **only** at this point if PA rule 12.3.2.1 cannot be met. New damming would be a discretionary activity under Rule 12.3.4.1 (i). PC 7 Policy 10A.2.2 only applies to the **take and use** of water. The above would be a permit to dam water so this policy would not be a relevant consideration. However, there needs to be provision for the take and use of water from the reservoir of the off-line dam if this will be greater than PA rules or s14 of the RMA for taking and using water. If a consent is required for the taking this will be subject to policies in PC7 on duration.

Discharge permits for dams

Dams may have a spillway for the discharge of water from the dam to avoid potential damage to the dam structure in the event of accidental overtopping. This design can be a safety feature, rather than an operational feature and often no discharges are anticipated as the dam is an off-line dam and supply to the dam is a managed process.

The discharge of water to water is a **discretionary activity** under Rule 12.B.1.10 of the RPW if a consent is required for the damming activity.

Existing damming activity

If we are reconsenting an existing dam the damming activity is likely to be a restricted discretionary activity.

The dam structure is part of the existing environment, but the damming of water is not. This is because:

- Land use consents run in perpetuity i.e. consent to subdivide, use and develop land
- There are various rules in the regional plan that makes the use and repair of these structures permitted activities eg rules 13.1.1.1, 13.3.1.1.
- Dam structures are part of the existing environment; however, damming of water which requires a new consent on expiry may not be regarded as part of the environment.
- Land use consents run in perpetuity, but water permits are finite; there can be no presumption that they will be re-consented (subject to what the relevant regional plan says) or that the terms and conditions will be the same. This means that there can be changes in lake level, flows below the dam, operating range when a damming activity is reconsigned.

Building Act and dam safety

Under the Building Act, all building work on dams must comply with the Building Code (Building Regulations 1992), irrespective of the size of the dam. This applies to the construction of new dams as well as the modification of existing dams, even if they do not need building consent or resource consent. It also applies to a dam's appurtenant structures. A Building Act permit is only required for large dams. A large dam means a dam that has a height of 4 or more metres and holds 20,000 or more cubic metres volume of water or other fluid. A Building Act permit in the Otago region can be applied for Environment Canterbury acting as a Building Consent Authority. More information can be found at:

<https://www.ecan.govt.nz/do-it-online/resource-consents/building-consent-for-large-dams/>

Dam safety refers to the safe operation and management of dams. Currently there is no specific regulations in place for managing dam safety. Central government revoked the Building (Dam Safety) Regulations 2008 on 31 July 2015 and have since proposed another set of dam safety regulations which are likely to be passed as a Bill of Parliament around mid-next year (2022). In the absence of specific dam safety regulations, the Building Act 2004 is the primary legislation regulating the construction and management of dams. In terms of regulating the long-term maintenance and operation of dams, it is necessary that this is considered through the water permit to dam water under the Regional Plan.

New Zealand Society on Large Dams (NZSOLD) is a technical group of Engineering New Zealand. NZSOLD released New Zealand Dam Safety Guidelines in 2015 to provide guidance on the construction of large dams which have been adopted as industry standard guidance on dam construction and safety. The proposed dam safety regulations are based on the New Zealand Society on Large Dams 2015 Guidelines (NZSOLD 2015) which sets out nationally accepted guidelines for the safe construction and operation of dams. As there are incorporated into the proposed regulations, it is reasonable to consider dam safety in relation to those. The dam safety regulation applies to all dams which are defined as a 'classifiable dam' and will apply varying requirements on dam owners to undertake ongoing monitoring and reporting.

Dam Safety Conditions on consents

In the absence of dam safety regulations under the Building Act, dam safety conditions as they relate to environmental effects may be applied to resource consents. Section 19 of the Building Act is likely to address many of the conditions that would be added to the resource consent, so this will not be duplicated on the RMA consent.