



Dams

Regional councils are responsible for ensuring that dams meet the requirements of the Building Act 2004, the Building (Dam Safety) Regulations 2022 and the Resource Management Act 1991 (RMA).

Together, these provisions ensure that environmental requirements and the risk to people and property are appropriately managed. If you own a dam or are planning to construct, modify or decommission a dam¹, this information sheet will help you understand the legislative requirements.

Dams and the Building Act 2004 (Building Act)

The [Building Act](#) ensures that dams are built to meet the standards set in the Building Code, so that they are structurally sound. The Building Act defines dams, and requires that all dams be constructed to meet the Building Code, regardless of their size and location.

'Dam':

- a. *means an artificial barrier, and its appurtenant structures, that –*
 - i. *is constructed to hold back water or other fluid under constant pressure so as to form a reservoir; and*
 - ii. *is used for the storage, control, or diversion of water or other fluid; and*
- b. *includes –*
 - i. *a flood control dam; and*
 - ii. *a natural feature that has been significantly modified to function as a dam; and*
 - iii. *a canal; but*
- c. *does not include a stopbank designed to control floodwaters².*

Large dams can have more risks associated with them, so the Building Act has additional controls around their construction and ongoing dam safety management (Dam Safety Regulations).

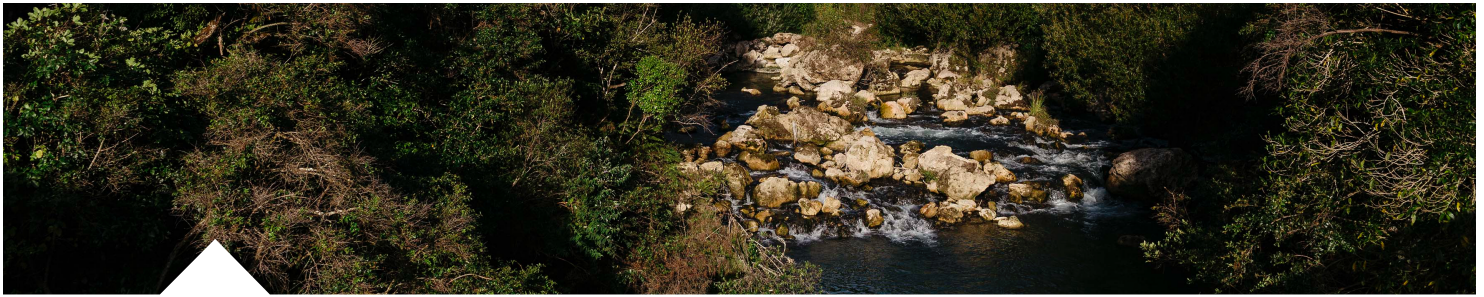
'Large dam' means a dam that has a height of four (4) or more metres and holds 20,000 or more cubic metres volume of water or other fluid³. Large dams are also referred to in the Building Act as classifiable dams which are subject to the [Dam Safety Regulations](#).

[Section 133B](#) of the Building Act sets out how the height of a dam is measured:

¹ The Building Act 2004 also controls canals and other structures associated with dams.

² [Section 7](#) of the Building Act 2004.

³.To meet the definition, it must have both the height and the volume, not just one or the other.



The height of a dam is the vertical distance from the crest of the dam and must be measured, -

- a. in the case of a dam across a stream, from the natural bed of the stream at the lowest downstream outside limit of the dam⁴; and*
- b. in the case of a dam not across a stream, from the lowest elevation at the outside limit of the dam, and*
- c. in the case of a canal, from the invert of the canal.*

The crest is:

the uppermost surface of a dam, not taking into account any camber allowed for settlement, or any curbs, parapets, guard rails, or other structures that are not part of the water-retaining structure; and for the avoidance of doubt, any freeboard is part of the water-retaining structure for the purposes of this definition⁵.

If your dam meets the criteria of a “Large dam”, you will need to apply for, and be granted, a building consent before you begin work. You’ll also need a **Project Information Memorandum (PIM)** from Horizons as part of any building consent application for a new large dam or modifications of a large dam. Submit PIM forms and enquiries to dam.safety@horizons.govt.nz.

Building consents for large dams are issued by the Waikato Regional Council on behalf of all regional councils in the North Island including Auckland Council but excluding Gisborne District Council. More information and application forms are available on [Horizons](#) and [Waikato Regional Council's](#) websites. Even if your proposed dam does not meet the definition of a “Large dam”, the Building Act requires that it still must be constructed in accordance with Building Code requirements. For more information about building work that doesn’t need a building consent visit [Ministry of Business, Innovation and Employment's \(MBIE's\)](#) website.

It is recommended that you engage a suitably qualified engineer to help design your dam to ensure it will meet the Building Act, and Building Code requirements, and it aligns with best practice as set out in the [New Zealand Dam Safety \(NZSOLD\) Dam Safety Guidelines](#)⁶.

Dam Safety Regulations

The Building (Dam Safety) Regulations 2022 came into effect on 13 May 2024. Under the regulations, owners of classifiable dams (large dams) are required to classify their dam as either low, medium, or high potential impact according to the classification requirements of the Dam Safety Regulations.

The owner must then have the classification audited and certified by a recognised engineer.

The classification is then submitted to Horizons for approval.

For dams commissioned after the regulations came into force (13 May 2024), the owner must supply the classification to Horizons 3 months after the dam is commissioned.

Review of the Dam Classification

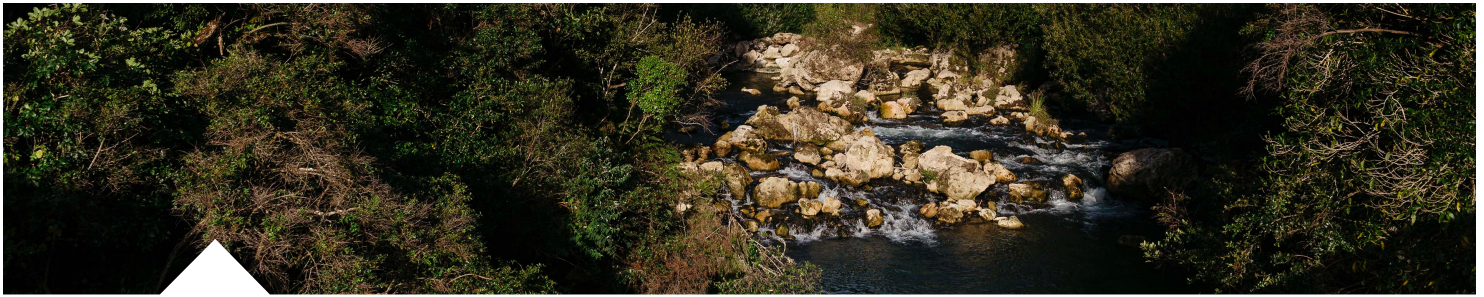
The classifications must be reviewed by the dam owner within five years of Horizons approving the classification, and after the first review, at intervals of not more than five years.

If the classification given is either medium or high potential impact, the dam owner must

⁴ [Section 133B](#) of the Building Act 2004.

⁵ [Section 7](#) of the Building Act 2004.

⁶ These [2023 Guidelines](#) are prepared by the New Zealand Society of Large Dams (NZSOLD).



then prepare a Dam Safety Assurance Programme (DSAP) and submit it to Horizons for approval.

If the classification given is high, the DSAP must be submitted not later than one year after Horizons approved the classification. In the case of a medium classification, the DSAP must be submitted not later than two years after Horizons approved the classification.

Review of the DSAP

Like the classifications, the DSAP's must also be reviewed. In the case of a high potential impact dam, the owner must review the DSAP within five years of Horizons approving the DSAP. Then after the first review at intervals of not more than five years.

In the case of a medium potential impact dam, the owner must review the DSAP within 10 years of Horizons approving the DSAP. Then after the first review at intervals of not more than seven years.

Horizons' approach to dangerous dams, earthquake-prone and flood-prone dams

The Building Act 2004 requires all regional councils to adopt a policy on dangerous dams, earthquake-prone dams and flood-prone dams. The Policy was reviewed to ensure it aligned with the dam safety regulations and was adopted by Council on 28 May 2024. The Policy can be downloaded from our [website](#).

The purpose of the policy is to state the approach and priorities that Council will take in relation to these types of dams, and how it applies to heritage dams.

Horizons will keep a register of dangerous, earthquake-prone and flood-prone dams, record the status of each classifiable dam and develop a monitoring procedure to maintain the register.

Horizons will also work with owners of identified dangerous dams to develop an

The owner must also review the DSAP, if at any time:

- a. building work that requires a building consent is carried out on the dam; and
- b. the building work results, or could result, in a change to the potential impact of the dam on persons, property, or the environment; or
- c. when requested by Horizons to do so, if the dam is an earthquake-prone dam, or flood-prone dam.

The DSAP must be kept on the dam or available on the owner's website or other electronic platform or other location agreed to by the owner and Horizons. It must also be available for inspection by Horizons.

The owner must also supply Horizons with an annual dam compliance certificate on each anniversary of the approval of the DSAP.

action plan (with timeframes) to increase the safety of the dam and eliminate or reduce the risks of the dam to people, property and the environment.

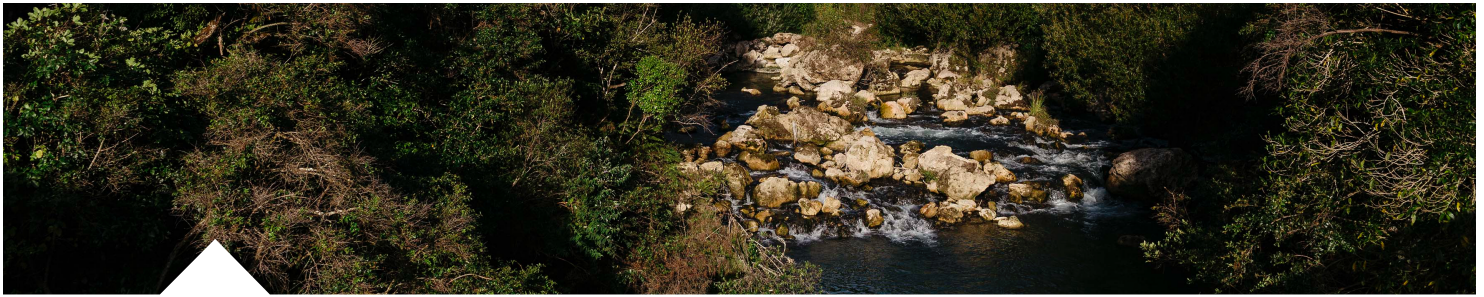
The Building Act states that a dam is [dangerous](#) if it is:

A high potential or medium potential impact dam; and is likely to fail -

- In the ordinary course of events; or
- In a [moderate earthquake](#) (as defined in the regulations); or
- In a [moderate flood](#) (as defined in the regulations).

A dam is an earthquake-prone dam for the purposes of the Building Act if the dam -

- a. Is a high potential impact dam or a medium potential impact dam; and



- b. Is likely to fail in an [earthquake threshold event](#) (as defined in the regulations).

A dam is a flood-prone dam for the purposes of the Building Act if the dam –

- a. Is a high potential impact dam or a medium potential impact dam; and
b. Is likely to fail in a [flood threshold event](#) (as defined in the regulations).

Dams and the RMA

The RMA deals with controlling the effects building a dam can have on the environment, including on instream life and habitats, and the disruption of the natural flow of water. In the Manawatū-Whanganui Region the [One Plan](#), the combined Regional Policy Statement, Regional Plan and Coastal Plan, sets out how to manage dams under the RMA.

Dams and the One Plan

Small dams can be constructed in rivers, artificial watercourses and on land in the Region without needing a resource consent, provided you can meet all of the conditions that apply to your dam and its location. These conditions are set out in [RP-LF-AWBD-R60 New and existing small dams](#) and [Table 15 General conditions for permitted activities and controlled activities involving the beds of rivers and lakes](#).

This information sheet provides guidance about how to meet the conditions; we recommend that you read this in conjunction with [RP-LF-AWBD-R60](#), Table 15, and the

Working in the beds of rivers and lakes – ‘general conditions’ information sheet [here](#).

If you can’t meet all the conditions, that doesn’t mean you can’t construct a dam. However, you will either need to consider whether you can alter your proposal to meet them, or apply for and be granted a resource consent before you start. Even if you don’t need a resource consent, you may need a building consent. For more information about resource consent contact Horizons Consents team via [email](#) or call a Duty Planner on freephone 0508 800 800 or visit [Horizons’ website](#).

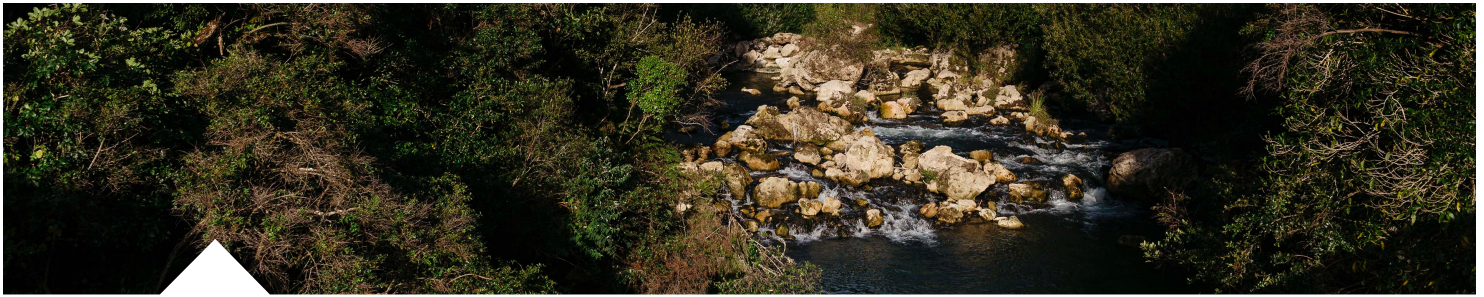
Location

Dams can be constructed in many places in the Region without needing a resource consent in catchments smaller than 50 hectares.

There are some places you will need to apply for, and be granted, consent before you begin construction⁷:

- River reaches that have the One Plan Value of Flood Control and Drainage. If you pay rates for a flood control or drainage scheme, contact the [Horizons Consents Team](#) for free advice.
- River reaches with the One Plan Value of Site of Significance – Aquatic or Site of Significance – Cultural. These reaches are described, and mapped at a regional scale, in [Schedule 2](#). A member of the [Horizons Consents Team](#) can help you work out whether your site is in one of these reaches.
- Wetlands. This would be the case if the wetland is considered to be rare, threatened or at-risk habitat under the One Plan or a Natural Inland Wetland in the National Environmental Standards for Freshwater. [Horizons’ staff](#) can provide free advice

⁷ This also applies to removing a culvert.



about the status of wetlands and other types of indigenous habitat on your property.

- Sites 500 m upstream or downstream of a flow recording site⁸, or 20 m upstream or downstream of a high pressure gas transmission pipeline. These pipelines are usually marked by a white triangle marker post or a yellow pipeline warning sign, or your local district or city council can give you this information.

You may also need a consent to construct a dam in a river on land leased from the Department of Conservation. There may be

restrictions around when you can construct your dam if the river has other values; refer to the Working in beds of rivers and lakes – ‘general conditions’ information sheet and conditions (13) to (20) in [Table 15](#) of the One Plan for more information.

There are some water bodies in the Region that are not allowed to be dammed at all. Some of these are protected by Water Conservation Orders or Notices. Most are the main stem of large rivers, but there are also some tributaries and streams. These water bodies are listed in [RP-LF-AWBD-R56 Damming of protected rivers](#).

Dam design – size and capacity under the One Plan

The maximum depth of water that can be in your dam (without a resource consent) is 3 metres. This is measured from the natural ground level at the upstream toe of the dam structure. Please note that the Building Act measures the height of a dam differently, for the purposes of determining whether a dam is a ‘large dam’ and needs building consent.

There must be a spillway that will allow a 200 year flood event to pass without overtopping the dam. You’ll need advice from a qualified

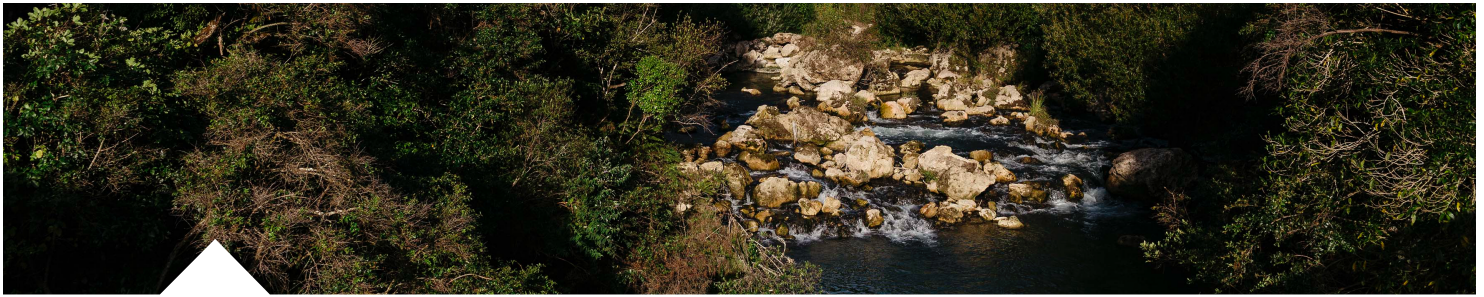
engineer with experience in dam design to ensure that your spillway meets this condition. There must always be a residual flow out of the dam if it’s in a river or artificial watercourse, including while it’s filling, and there must be safe passage of fish both upstream and downstream. Water behind the dam must not encroach onto your neighbour’s properties. [Horizons’ engineers](#) can review your design and advise you whether it will meet these conditions.

Construction and maintenance under the One Plan

The construction and maintenance of the dam must meet all the applicable general conditions listed in [Table 15](#) of the One Plan, which set a framework around a common sense approach to managing the effects of activities in the bed of any river or lake. In particular, the materials used to construct your dam must not be toxic to aquatic ecosystems;

uncured concrete and tyres are two materials that are unlikely to meet this condition. If you do need to do work beside the river (outside the bed) to complete the construction of your dam you may need to get a resource consent for this, even if you don’t need consent for the dam itself. A [Consents Duty Planner](#) can give you advice as to whether you might need a resource consent.

⁸ You can check this on [Horizons’ website](#).



Existing small dams

If you have an existing dam, it must meet all the same conditions as a new dam or you will need to apply for a resource consent. Dams that are not designed properly are a serious risk to people and property downstream, as well as instream life. [RP-LF-AWBD-R60](#) sets standards to avoid those risks, and when they

can't be met a consent process provides the opportunity to assess the effects of the dam and, if necessary, make improvements to its safety. [Horizons' staff](#) can provide free advice about your existing dam, including whether any improvements or upgrades will need a building consent.

Taking water

In the One Plan, taking water is treated as a separate activity to damming it. Under [RF-LF-TUD-R39 Minor takes and uses of surface water](#), you are allowed to take a small volume of water each day from across all the surface water sources on your property⁹ at a rate of no more than 2 litres per second without a resource consent:

- 400 litres per hectare per day for animal farming, to a maximum of 30 m³ per day per property; or
- 15 m³ per day per property for any other use

at a rate of no more than 2 litres per second.

You must also meet the following conditions:

- the intake velocity must not be more than 0.3 m per second;
- the intake must be covered by a screen with a maximum mesh aperture size of 3 mm; and
- the take can't be from a rare, threatened or at-risk habitat.

You also need to notify Horizons (by [email or letter](#)) where the take is, the maximum instantaneous rate of take, and what you will be using the water for – this helps us manage the demand for water across the Region.

Additional information

Contact Horizons Regional Council on freephone 0508 800 800 or email help@horizons.govt.nz.

⁹ There is a separate quota for groundwater takes (from bores).