Interpreting excluded works – dams

The Water Management (General) Regulation 2025 'excluded work' exemptions may apply to the construction and use of certain dams

How to interpret excluded work exemptions

Part 3, Division 3 and Part 4, Division 2 of the Water Management (General) Regulation 2025 (the Regulation) establish exemptions from the requirement to hold a water access licence, a water use approval and a water supply work approval. Some of these exemptions relate to 'excluded works' as set out in Schedule 4, Part 7 of the Regulation.

This fact sheet will explain how some of these excluded work exemptions should be interpreted.

The excluded work exemptions discussed in this fact sheet all relate to the construction and use of a dam. The word 'dam' is not defined in the *Water Management Act 2000* or the Regulation. Therefore, for the purposes of these excluded work exemptions, the word 'dam' is given its ordinary and natural meaning.

The Macquarie Dictionary includes the following definitions of 'dam' as a noun:

- a barrier to obstruct the flow of water, especially one of earth, masonry, etc., built across a river in order to create a reservoir for use as a water supply or in the generation of electricity
- a body of water confined by such a barrier
- an artificial water storage for farm use, constructed by creating a barrier, either a wall or earthworks, to contain run-off from a slope; tank
- any barrier resembling a dam (def. 1).

Dams must be on a minor stream or within a catchment of a minor stream

Dams constructed under the exemptions discussed in this fact sheet must be located on, or within a catchment of, a 'minor stream'.

Section 4 of the Regulation defines 'minor stream' to be:

1. minor stream means -

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a. a stream for which the location is specified in the hydro line spatial data and that has the following characteristics—

i. is identified as a first or second order stream,

ii. does not maintain a visible flow occurring on a continuous basis, or that would occur if there were no artificial extractions of water or obstruction, of flow upstream,

iii. does not carry flows emanating from a third or higher order stream, or

b. a stream for which the location is not specified in the hydro line spatial data.

2. A stream is specified in the hydro line spatial data if the stream is identified as a watercourse, however described, in accordance with the legend or terms of the hydro line spatial data.

Section 4(5) of the Regulation confirms a 'stream' includes part of a stream.

The method of determining the stream order of a minor stream is the Strahler system. More information on the Strahler system is on the department's website at water.nsw.gov.au/about-us > Learn about water > An introduction to water > An introduction to Strahler stream order

More information on and access to hydro line spatial data is on the department's website at water.nsw.gov.au/controlled-activity-approvals > Development activities on waterfront land > Water Management (General) Regulation 2018 Hydro Line spatial data

Dams for drainage or effluent to prevent contamination of a water source

Schedule 4, Part 7, section 70 of the Regulation provides an exemption for:

A dam that is—

a. constructed and used to capture, contain and recirculate drainage or effluent to prevent the contamination of a water source, and

b. either, in relation to the use referred to in paragraph (a)—

i. of a structural size that is the minimum necessary for the use, or

ii. required by a public authority for the use, and

c. located on, or within a catchment of, a minor stream.

This exemption allows landholders to construct and use a dam to capture, contain and recirculate drainage or effluent that would otherwise result in a water source being contaminated.

Landholders can take and use the captured water on their property without a water access licence, water use approval or water supply work approval. This exemption encourages landholders to reduce water quality risks to local and downstream water sources.

Clean water can be captured

The exemption does not explicitly apply only to the capture of contaminated or 'dirty' water. The words "to prevent the contamination of a water source" allows for a broader interpretation where the captured drainage or effluent water does not have to have been contaminated before the capture occurred. Therefore, this exemption can apply to the capture of water that is not already contaminated, if it would have otherwise flowed over land which would result in it contaminating a water source. For the exemption to apply in these circumstances there needs to be either clear evidence that without the capture of that water it would have resulted in a water source being contaminated or a legal requirement (such as a condition of development consent) to prevent clean water runoff from becoming contaminated and entering downstream water sources.

However, those using this exemption are encouraged to continue separating clean water from dirty water and continue to categorise their dams as being either:

- dirty water: drainage or effluent water captured from active areas, run-off from infrastructure and run-off from disturbed catchments
- clean water: drainage or effluent water captured from undisturbed catchments.

As evidenced in some of the guidance material currently being used by industry (see 'Best management practice' below), this is considered to be good practice.

It is recognised though, that such separation may not always be possible and that the exemption may still apply in these circumstances.

The *Water Management Act 2000* does not define the words 'drainage' or 'effluent'. Therefore, these words should be given their ordinary and natural meaning.

The Macquarie Dictionary includes the following definitions of 'drainage':

- the act or process of draining
- a system of drains, artificial or natural

- that which is drained off.

In this exemption, the word 'drainage' is a noun and therefore, the third definition "that which is drained off" is relevant.

Under this definition the water running off the land is drainage as it is in the process of draining from the land, that is, 'that which is drained off'.

The Macquarie Dictionary includes the following relevant definitions of 'effluent':

- flowing out or forth
- that which flows out or forth; outflow
- a stream flowing out of another stream, a lake, etc
- the outflow from sewage during purification
- liquid industrial waste.

Captured water can be used for any purpose

The requirement for dams to be ''constructed and used to capture, contain and recirculate drainage or effluent' does not mean that captured water cannot be used. The word 'recirculate' applies to the use of the dam rather than the use of the water captured by it. That is, the dam can be used to recirculate water, which implies that the captured water is able to be taken from the dam and used for some purpose and whatever is not consumed be allowed to flow back into it. Therefore, water captured under this exemption can be used for any purpose provided it does not result in the contamination of a water source. It can also be released back into a water source, provided it would not contaminate that or other water source.

Dam must be the minimum size necessary

A dam constructed under this exemption must be the minimum size necessary to fulfil the erosion control function. The means by which the minimum size is determined is not defined and an assessment of what would be necessary to prevent the contamination of water will vary. Proponents will need to be able to demonstrate that they have undertaken an assessment of what would be the minimum necessary structural size for the use of the dam to prevent the contamination of the water source. This could be done, for example, by reference to best management practice.

Best management practice

It is recognised that industry and the department have been guided by Landcom's 2004 publication: Managing Urban Stormwater: Soils and Construction Volume 1 Fourth edition, and the mining industry also uses Managing Urban Stormwater: soils and construction. Volume 2E - mines and quarries. These documents are generally used y industry as a guide on how to construct a dam to achieve various purposes, such as to prevent contamination.

The Australian Government (2016) publication, Water Stewardship: Leading Practice Sustainable Development Program for the Mining Industry provides guiding principles and a strategic framework for managing mine-water-related issues. It outlines appropriate management of water systems on mine sites and specifically discusses approaches and principles for managing water quality. Importantly, it discusses the prevention of contamination of water sources as requiring streamflow, and drainage and/or effluent to always remain separate. In practice, onsite streamflow should be diverted away from the dam, re-entering downstream of the dam avoiding opportunities to mix with the recirculating drainage and/or effluent.

Public authorities

As defined in the Dictionary to the *Water Management Act 2000*, public authority means a:

1. Minister of the Crown
2. Public Service agency
3. statutory body representing the Crown
4. statutory State owned corporation (or any of its subsidiaries) within the meaning of the *State Owned Corporations Act 1989*
5. council or county council within the meaning of the *Local Government Act 1993*

It does not include any person or body declared by the regulations not to be a public authority.

However, for the purpose of the exemption, a public authority does not include Landcom or the Superannuation Administration Corporation or any of their subsidiaries.

A dam required by a public authority (where a public authority requires a proponent or landholder to construct a dam) does not need to be of a structural size that is minimum necessary for the use, for the purposes of the exemption.

Contamination of a water source

Neither the *Water Management Act 2000* nor the Water Management (General) Regulation 2025 set out how contamination of a water source should be assessed and determined. Therefore, the word 'contaminate' takes its ordinary meaning which is defined in the Macquarie Dictionary as including "to render impure by contact or mixture". Such a broad definition could make assessment of compliance with this exemption exceptionally difficult. For example, even if dams are constructed to best management practice, contamination of a water source could still easily occur.

Dam must be on a minor stream or within a catchment of a minor stream

A dam constructed under this exemption must be located on, or within a catchment of, a 'minor stream'. See the beginning of this fact sheet for the definition of a minor stream.

Dams for control or prevention of soil erosion

Schedule 4, Part 7, section 68 of the Regulation provides an exemption for:

A dam —

a. that is constructed and used for the control or prevention of soil erosion, and

b. from which no water is reticulated or pumped, other than to a single stock drinking trough in 1 adjoining paddock, and

c. for which the structural size is the minimum necessary for the use referred to in paragraph (a), and

d. that is located on, or within a catchment of, a minor stream.

Neither the *Water Management Act 2000* nor the Water Management (General) Regulation 2025 define the term 'soil erosion'. The Macquarie Dictionary definition of 'erosion' includes, "the process by which the surface of the earth is worn away by the action of water, glaciers, wind, waves, etc". Whilst it is a natural process, it can be accelerated by human activities (such as through land clearing). The term 'control or prevention of soil erosion' means actions undertaken to restrict loss of soil. Examples of such dams could include:

- streambed grade control structures
- check dams
- leaky dams
- gully plug dams.

Soil erosion dams are exempted from requiring a water access licence, a water use approval and a water supply work approval to encourage landholders to manage soil erosion on their properties to minimise water quality impacts downstream.

Reticulated or pumped only for a stock drinking trough

Neither the *Water Management Act 2000* nor the Regulations define 'reticulated'. Therefore, its ordinary meaning should be applied.

> The Macquarie Dictionary definition for 'reticulate' includes "to cause (water, etc) to pass through a system of pipes".

In terms of the use of the word 'pumped' the exemption should be interpreted to mean the pumping of water from the dam is not permitted for any purpose other than the reticulation of water to a single stock trough in only one paddock that adjoins the dam.

Whilst the size of the stock trough is not specified, constraints indicate that the trough and water is to have limited use. Therefore, the exemption should be interpreted as not including provision of water for intensive livestock production.

Dam must be the minimum size necessary

A dam constructed under this exemption must be the minimum size necessary to fulfil the erosion control function. The means by which the minimum size is determined is not defined and an assessment of what would be necessary to fulfil the erosion control function will vary depending on the type of soil, expected weather conditions and slope of the land. Therefore, proponents will need to be able to demonstrate that they have undertaken an assessment of what would be necessary to fulfil the erosion control function and that the dam has been constructed in accordance with it.

Dam must be on a minor stream or within a catchment of a minor stream

A dam constructed under this exemption must be located on, or within a catchment of, a 'minor stream'. See the beginning of this fact sheet for the definition of a minor stream.

Dams for flood detention and mitigation

> Schedule 4, Part 7, section 69 of the Regulation provides an exemption for:
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> A dam —

a. that is constructed and used for flood detention and mitigation, and

b. from which no water is reticulated or pumped, other than for the purpose of releasing water between flood events, and

c. that is located on, or within a catchment of, a minor stream.

Landholders can construct and use a dam under this exemption without the need for a water access licence, a water use approval and a water supply work approval if it is for flood detention and to mitigate the risk of flooding downstream. A reticulated water supply system or pump cannot be directly connected to the dam. This effectively means that the captured water cannot be extracted from the dam and used for any purpose.

This exemption does not apply if the dam is being used for other purposes such as capturing water under a harvestable rights order or storing water that has been taken under a domestic and stock right, native title right or access licence or for recreational purposes.

Captured water can be released

The exemption states that the water cannot be reticulated or pumped, which means that a reticulated water supply system or pump cannot be directly connected to the dam and the water captured by it. Whilst the intent of this exemption is to allow the capture of water to attenuate downstream flows, it does not impose any constraints on how a dam might achieve this. For example, the exemption does not state whether it only applies to flood retarding basins and thereby excludes any structure with outlet works that can be operated.

For a dam to serve a flood detention and mitigation purpose it may be necessary for the water contained in the dam to be released between flood events. The release would ensure that space is created within the dam to enable it to fill with water during a subsequent flood event and protect downstream communities and environments from flood impacts. The release of water from the dam and any legal downstream extraction of it, does not invalidate the exemption.

Best management practice guidelines

Whilst this exemption does not require dams to be constructed in accordance with best management practice guidelines, the following useful guidance material exists:

- Australian Rainfall Runoff: A Guide to Flood Estimation provides guidance for mining, agriculture and infrastructure projects. It outlines two potential risks and approaches to managing the risks for mining, associated with inundation of the mine and its operation and changes to flood behaviour for communities upstream and downstream.

- Dams Safety NSW has a range of relevant guidance materials on its website including factsheets and guidelines.

Dam must be on a minor stream or within a catchment of a minor stream

A dam constructed under this exemption must be located on, or within a catchment of, a 'minor stream'. See the beginning of this fact sheet for the definition of a minor stream.

Dams for environmental management

Schedule 4, Part 7, section 71 of the Regulation provides an exemption for:

A dam —

a. that is constructed only for an environmental management purpose specified by the Minister, and

b. that is located on, or within a catchment of, a minor stream, and

c. from which water is used primarily for the environmental management purpose, and

d. approved in writing by the Minister subject to the specifications in the approval.

Proponents seeking to construct a dam under this exemption require written approval from the NSW Minister for Water (or equivalent) or delegate before doing so. The approval must clearly define the environmental management purpose/s that the dam and the water captured by it is being used for. Therefore, before an approval can be provided by the department under delegated authority, officers will need to be satisfied that there is a clear and demonstrable environmental objective. Agreement with other relevant government agencies may need to be sought as to whether the environmental purpose is valid. For example, the environmental purpose may need to be consistent with the objectives of a relevant water sharing plan or any other environmental planning instrument.

The environmental purpose could also be as set out by a legal requirement. For example, a condition of development consent may require water to be diverted around an activity to avoid loss of flow to a downstream water source. This exemption could apply to a dam required to comply with such a condition, provided written approval specifying the environmental purpose has been obtained.

If required to demonstrate compliance with this exemption, the landholder will need to provide an original version of the written approval which includes the specified environmental management

purpose and show how the dam and any use of the water captured by it is in accordance with that approval.

Water may be taken from the dam under this exemption. However, that water must primarily be used for the environmental management purpose specified in the Minister's written approval.

This does not mean that the exemption cannot also result in the dam providing some incidental benefit that is in addition to the environmental outcome being sought. For example, the dam could also be used for recreational purposes.

Dam must be on a minor stream or within a catchment of a minor stream

A dam constructed under this exemption must be located on, or within a catchment of, a 'minor stream'. See the beginning of this fact sheet for the definition of a minor stream.

Licences, approvals and exemptions

Go to water.nsw.gov.au/licensing-and-approvals for more information on licensing, approvals and applicable exemptions.

The department

The department is responsible for all controlled activity approvals and issues licences and approvals for large water users such as water utilities, mines and irrigation corporations.

Contact the department

Phone: 1300 081 047 (business hours)

Email: water.enquiries@dcceew.nsw.gov.au

Website: water.dpie.nsw.gov.au

WaterNSW

WaterNSW is responsible for water access licences and associated approvals required by rural landholders, rural industries and developments which are not state-significant development, or state-significant infrastructure.

Contact WaterNSW

- Phone: 1300 662 077
- Email: Customer.Helpdesk@waternsw.com.au

- Website: www.waternsw.com.au

Reporting suspicious water activity

To make a confidential report of suspicious water activity, contact the Natural Resources Access Regulator (NRAR).

Contact NRAR

- Use NRAR's online reporting form at nrar.nsw.gov.au/suspicious-activities
- Phone: 1800 633 362
- Website: www.nrar.nsw.gov.au