

Interpreting excluded works dams

The Water Management (General) Regulation 2018's 'excluded work' exemptions may apply to the construction and use of certain dams.

How to interpret excluded work exemptions

Division 2 of Part 2 and Division 2 of Part 3 of the Water Management (General) Regulation 2018 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 1 of the Regulation.

The purpose of this document is to articulate 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 Water Management (General) Regulation 2018. 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 to prevent contamination of a water source

Clause 3 of Schedule 1 of the Water Management (General) Regulation 2018 allows an exemption for:

Dams solely for the capture, containment and recirculation of drainage and/or effluent, consistent with best management practice or required by a public authority (other than Landcom or the Superannuation Administration Corporation or any of their subsidiaries) to prevent the contamination of a water source, that are located on a minor stream.

This exemption allows landholders to construct 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.

There are 4 elements to this exemption:

The work must be a dam.

The dam must be used solely for the capture, containment and recirculation of drainage and/or effluent to prevent the contamination of a water source.

The dam must be:

- (a) consistent with best management practice, or
- (b) required by a public authority (other than specified entities),

The dam must prevent the contamination of a water source.

The dam must be located on a minor stream.

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, or
- **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 obligations' below), this is considered to be good practice and would make assessment of compliance with this exemption easier for water users and Government.

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 of the land is considered to be drainage as it is in the process of draining from the land, i.e. ‘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 ‘solely for the capture, containment and recirculation of drainage’ does not mean that captured water cannot be used. This is because the word ‘solely’ relates only to the dam and not the water captured by it. Additionally, the word ‘recirculation’ 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.

This exemption refers to dam being ‘solely for the capture, containment and recirculation of drainage’. To comply with this exemption, a dam must not have a secondary or additional purpose, such as to store water taken under an access licence. However, if the top of a dam wall is used as an access road but the only use of the dam is as a dam to capture, contain and recirculate drainage and/or effluent, then it should still be considered to be an excluded work.

Best management practice obligations

The construction and operation of a dam under this exemption must be consistent with ‘best management practice’ or as ‘required by a public authority’. However, the exemption does not currently specify how best management practice is determined.

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 by the mining industry to guide mines 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.

However, to date the Department has not endorsed a particular document, principle or practice as being 'best management practice'. This does not mean that the exemption has no effect. It means proponents must be able to show that they have:

- investigated what best management practice may be (the documents referred to above will continue to be useful in this regard)
- attempted to construct their dam in accordance with it
- can justify any departure from possible best management practice, in terms of potential water source contamination outcomes,

This applies except where construction and operation of the dam is otherwise consistent with a requirement of a public authority.

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

- Minister of the Crown
- Public Service agency
- statutory body representing the Crown
- statutory State owned corporation (or any of its subsidiaries) within the meaning of the [State Owned Corporations Act 1989](#)
- 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, 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 consistent with best management practice for the purposes of the exemption.

Contamination of a water source

Neither the *Water Management Act 2000* nor the Water Management (General) Regulation 2018 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. The Department will consider possible amendments to this exemption which could:

- align more closely with definitions in the *Protection of the Environment Operations Act 1997* such as “pollution” and “pollution incident”
- allow the Minister to specify particular water quality indicators or thresholds required to be taken into account when assessing whether the water source would likely become contaminated or polluted.

Dam must be on a minor stream

A dam constructed under this exemption must be on a ‘minor stream’. Clause 3 of the Water Management (General) Regulation 2018 defines ‘minor stream’ to be:

- a. any stream or part of a stream —
 - i. the location of which is specified in the hydroline spatial data, and
 - ii. that is identified as a first or second order stream, or part of such a stream, as determined in accordance with the system set out in Schedule 2 of the Regulation, and
 - iii. that does not maintain a permanent flow of water, being a visible flow that occurs on a continuous basis, or would so occur if there were no artificial abstractions of water or obstruction of flows upstream, and
 - iv. that does not at any time carry flows emanating from a third or higher order stream as determined in accordance with the system set out in Schedule 2 of the Regulation, or
- b. any stream or part of a stream the location of which is not specified in the hydroline spatial data.

For the purposes of paragraphs (a)(i) and (b), a stream is specified in the hydroline spatial data if it is identified as a watercourse (however described) in accordance with the legend or terms of that data.

Soil erosion dams

Clause 1 of Schedule 1 of the Water Management (General) Regulation 2018 allows an exemption for:

Dams solely for the control or prevention of soil erosion –

- (a) from which no water is reticulated (unless, if the dam is fenced off for erosion control purposes, to a stock drinking trough in an adjoining paddock) or pumped, and
- (b) the structural size of which is the minimum necessary to fulfil the erosion control function, and
- (c) that are located on a minor stream.

Neither the *Water Management Act 2000* nor the Water Management (General) Regulation 2018 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.

Water can be reticulated or pumped if the dam is fenced

Whilst the exemption refers to the fencing of a dam for erosion control purposes, this does not mean that the dam must be fenced off for the exemption to apply. It means that water captured in the dam can be reticulated if the dam is fenced off. This is intended to encourage landholders to prevent stock and pest grazing or trampling, which would:

- damage the vegetation in the vicinity of the dam
- possibly damage the dam itself
- impact on its erosion control function.

However, the reticulated water can only supply a stock trough (i.e., one trough) which must be in a paddock that adjoins the fenced off area of the dam. This is because the exemption refers to ‘a’ stock trough and ‘an’ adjoining paddock. The use of ‘a’ implies one stock trough and the use of ‘an’ rather than ‘any’ implies that only one adjoining paddock could be serviced by the dam for which an exemption is sought. Whilst the size of the stock trough is not specified, these 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.

This Department proposes to amend this exemption to clarify that the reticulated water cannot be used for intensive livestock production.

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 stock trough in a paddock that adjoins the fenced off area of the dam.

Dam must be the minimum size

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.

The exemption refers to the term ‘solely,’ which means that the dam must not be used for any other purpose except to capture water in order to control and prevent soil erosion. This means the 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.

However, if the top of a dam wall is used as an access road but the only use of the dam itself is as a dam for the control or prevention of soil erosion, it should be considered be an excluded work.

Dam must be on a minor stream

A dam constructed under this exemption must be on a ‘minor stream’. Clause 3 of the Water Management (General) Regulation 2018 defines ‘minor stream’ to be:

- a. any stream or part of a stream —
 - i. the location of which is specified in the hydroline spatial data, and
 - ii. that is identified as a first or second order stream, or part of such a stream, as determined in accordance with the system set out in Schedule 2 of the Regulation, and
 - iii. that does not maintain a permanent flow of water, being a visible flow that occurs on a continuous basis, or would so occur if there were no artificial abstractions of water or obstruction of flows upstream, and
 - iv. that does not at any time carry flows emanating from a third or higher order stream as determined in accordance with the system set out in Schedule 2 of the Regulation, or

- b. any stream or part of a stream the location of which is not specified in the hydroline spatial data.

For the purposes of paragraphs (a)(i) and (b), a stream is specified in the hydroline spatial data if it is identified as a watercourse (however described) in accordance with the legend or terms of that data.

Flood detention and mitigation dams

Clause 2 of Schedule 1 of the Water Management (General) Regulation 2018 allows an exemption for:

Dams solely for flood detention and mitigation –

- (a) from which no water is reticulated or pumped, and
- (b) that are located on a minor stream

Landholders are able to construct a dam under this exemption if it is solely 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 refers to a dam being ‘solely for flood detention and mitigation’. This means the 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. It also means that the dam cannot be used 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 in order 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. However, it is recognised that dams with outlet works that can be operated are unlikely to be used “solely for flood detention and mitigation”. Nevertheless, under the current wording of this exemption, 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

A dam constructed under this exemption must be on a 'minor stream'. Clause 3 of the Water Management (General) Regulation 2018 defines 'minor stream' to be:

- a. any stream or part of a stream —
 - i. the location of which is specified in the hydroline spatial data, and
 - ii. that is identified as a first or second order stream, or part of such a stream, as determined in accordance with the system set out in Schedule 2 of the Regulation, and
 - iii. that does not maintain a permanent flow of water, being a visible flow that occurs on a continuous basis, or would so occur if there were no artificial abstractions of water or obstruction of flows upstream, and
 - iv. that does not at any time carry flows emanating from a third or higher order stream as determined in accordance with the system set out in Schedule 2 of the Regulation, or
- b. any stream or part of a stream the location of which is not specified in the hydroline spatial data.

For the purposes of paragraphs (a)(i) and (b), a stream is specified in the hydroline spatial data if it is identified as a watercourse (however described) in accordance with the legend or terms of that data.

Environmental management dams

Clause 4 of Schedule 1 of the Water Management (General) Regulation 2018 allows an exemption for:

- Dams approved in writing by the Minister for specific environmental management purposes –
- (a) that are located on a minor stream, and
 - (b) from which water is used solely for those environmental purposes.

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. In this regard, 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.

The exemption refers to the term ‘solely’. This is in relation to the use of the captured water rather than the use of the dam. Water may be taken from the dam under this exemption. However, that water must not be used for a purpose other than 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

A dam constructed under this exemption must be on a ‘minor stream’. Clause 3 of the Water Management (General) Regulation 2018 defines ‘minor stream’ to be:

- a. any stream or part of a stream –
 - i. the location of which is specified in the hydroline spatial data, and

- ii. that is identified as a first or second order stream, or part of such a stream, as determined in accordance with the system set out in Schedule 2 of the Regulation, and
 - iii. that does not maintain a permanent flow of water, being a visible flow that occurs on a continuous basis, or would so occur if there were no artificial abstractions of water or obstruction of flows upstream, and
 - iv. that does not at any time carry flows emanating from a third or higher order stream as determined in accordance with the system set out in Schedule 2 of the Regulation, or
- b. any stream or part of a stream the location of which is not specified in the hydroline spatial data.

For the purposes of paragraphs (a)(i) and (b), a stream is specified in the hydroline spatial data if it is identified as a watercourse (however described) in accordance with the legend or terms of that data.

Licences, approvals and exemptions

Go to www.dpie.nsw.gov.au/licensing-and-trade for more information on licensing, approvals and any applicable exemptions.

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 us

- Call WaterNSW on 1300 662 077
- Email WaterNSW on Customer.Helpdesk@waternsw.com.au
- Visit www.waternsw.com.au

Controlled activity approvals

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

- Call the department on 1800 633 362
- Email waterlicensing.servicedesk@dpie.nsw.gov.au
- Visit www.water.dpie.nsw.gov.au

Reporting suspicious water activity

To make a confidential report of suspicious water activity:

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