

Dams in the Hills and Fleurieu region



Are you thinking of building a new dam; deepening, enlarging, removing or repairing the wall on an existing dam?

These are just some examples of Water Affecting Activities (WAA) that require a WAA permit or development approval.

This fact sheet provides important details on earthworks associated with dams, and your obligations under the Landscape South Australia Act 2019 (LSA Act) and the Hills and Fleurieu Water-Affecting Activity Control Policy (HF WAACP). These documents can be viewed on the Hills and Fleurieu Landscape Boards (the Board) website:

<https://www.landscape.sa.gov.au/hf/water/managing-water/water-affecting-activities>.

Controls for dam development

Water is a precious shared resource so new dam development (construction or enlargement) must be carefully managed to ensure a balance is maintained between dam owners, existing water users, and water-dependent ecosystems. Due to the high

number of existing dams and potential impacts to sensitive water-dependent ecosystems, authorisation for new or enlarged dams are generally **not approved** at this point in time.

If you are proposing to increase the capacity of an existing dam or construct a new one and your property is located in the Eastern or Western Mount Lofty Ranges your proposal needs to be consistent with the rules in the relevant Water Allocation Plan (WAP) and the HF WAACP.

At this point in time the allocation of new water to allow new (or larger) dam storages is reserved by the Minister until it is clear that environmental water provisions can sustain water dependent ecosystems at a low level of risk.

For further information, visit the Boards website: [Water Allocation Planning](#) or contact our Water Resources Team

Why control dam development?

New dams may impact supply to existing water users and the environment (water-dependent ecosystems). Dam development must be managed in a way that balances existing

production and environmental needs with those for new development.

Without managing dam development a number of problems could result:

- Reduced flows to downstream users
- Changes to the volume and timing of flows to ecosystems that depend on particular flow conditions
- Erosion and/or sedimentation
- Increased salinity.

Approval requirements

The *LSA Act* provides for the control of various activities that affect water, including dams. Such activities are regulated through WAA permits issued by the Hills and Fleurieu Landscape Board (the Board). You will need to apply for a WAA permit if you plan to undertake the follow activities on dams with a volume of 5ML or less, and/or with walls of 3m or less above the natural ground surface:

- construction of a new dam
- modification (increase or decrease)
- repairs
- removal.

Note: If the dam is **bigger than 5ML**, or has a **wall height greater than 3 metres**, or if your dam is located **in the hills face zone**, you must apply for development approval from your local council. The *Development Act 1993* provides for the control of dam activities in this size range. This is a local government process seeks input from the Hills and Fleurieu Landscape Board as part of its assessment process – thus negating the need for a separate approval.

Application forms are obtained from the Boards website: [Permits for water affecting activities](#).

Criteria for issuing WAA permits

A dam application will be assessed against the policies and principles in the HF WAACP and relevant WAPs (for prescribed surface water areas).

Policies and principles may vary between Landscape regions and WAPs. We recommend you download the relevant WAACP and/or appropriate WAP from the Boards website to be clear about the principles that apply in your circumstance.

The criteria for assessing applications include (but not limited to):

- local soil conditions and salinity
- Impacts on downstream users
- Remnant vegetation
- Potential for erosion
- Protection of aquatic ecosystems
- Dam construction and design
- The number and size of dams
- The need for low flow bypasses
- Protection of habitat for threatened species
- Special criteria relating to on-stream dams.



How long does the process take?

- Permit applications are assessed within 40 working days. If you have been requested to provide additional information, the timeframe maybe extended to take account of delays in obtaining additional information.
- WAA permits are usually valid for one year from the date of issue.

Dam definitions

What is an off-stream dam?

A dam, wall or other structure that is not constructed across a watercourse or drainage path. Off-stream dams are designed to hold

water diverted, or pumped, from a watercourse, a drainage path, an aquifer or from another source. Off-stream dams may capture a limited volume of surface water from the catchment above the dam.

What is an on-stream dam?

A dam, wall or other structure placed, or constructed on, in, or across a watercourse or drainage path for the purpose of holding and storing the natural flow of that watercourse or the surface water.

Turkeys nest dams

Turkeys nest dams consist of a completely enclosed earth embankment, which is filled by pumping from an alternative water source (i.e. a creek, groundwater or other smaller dams).

A WAA permit is not required to build a turkey's nest, however there are location and design considerations. A development approval from your local council is required for turkeys nest dams over 3m in height or over 5ML.



How big is my dam?

Dam depth = distance from deepest point inside the dam to the top spillway.

Dam wall height = external height from natural ground surface to the top of the wall.

Dam capacity calculation guide: dam volume (ML) = $(0.4 \times \text{area (m}^2) \times \text{depth (m)}) / 1000$, where 0.4 is a conversion factor that takes into account the slope of the sides of the dam.

What is a low flow bypass?

A low flow bypass is a structure, similar to a small weir, used to direct low volume flows around a dam and back to the watercourse downstream of a dam. Low flow bypasses improve the timing and volume of flow to sustain water dependent plants and animals in downstream environments. These flows are also known as environmental flows. Low flow devices are designed to be site specific. Advice should be sought from the Hills and Fleurieu Landscape Board or a suitably qualified consultant early in the design process.

A low flow bypass is one of the conditions that may be included on your approval if you are permitted to construct an on-stream dam.

Desilting

De-silting does not require a WAA permit if it meets the following criteria:

- a) *desilting* only involves the removal of unconsolidated material deposited since construction of the dam or material deposited since the dam was previously desilted;
- b) *desilting* does not enlarge the dam capacity or increase the dam wall height beyond their original dimensions;
- c) the dam is not on a watercourse with a *stream order* of 3 or higher;
- d) the excavated material is not placed in or near a watercourse, floodplain or lake;
- e) the excavated material does not:
 - i. adversely affect native vegetation;
 - ii. impede the natural flow of surface water;
 - iii. re-enter any water body; or
 - iv. facilitate the spread of pest plants or pathogenic material; and
 - v. appropriate measures are taken to minimise water quality impacts arising from *desilting*.

Penalties may apply

Undertaking a WAA without a permit or in breach of the permit conditions is an offence under the *LSA Act*. If you are unsure whether the works you are proposing will require a

WAA permit, call the Board for advice before undertaking any works.

The serving of protection orders or criminal/civil enforcement notices may be undertaken by the Board for breaches of the *LSA Act*. Financial penalties or prosecution may also apply.

Note: WAA permits do not allow for the taking of water in prescribed areas. This is dealt with separately by the issuing of a water licence. For more information regarding water licences please refer to the Department of Environment and Water - Water Licensing branch website: <https://www.environment.sa.gov.au/licences-and-permits/water-licence-and-permit-forms>.



Further information

Flood hazard management for dams

Dam owners can find information about preventing and responding to dam failure during flood events on the Department of Environment and Water website: [Dams - hazard management](#).

Need more information

Contact the Hills and Fleurieu Landscape Board:

- Mt Barker (08) 8391 7500

<https://www.landscape.sa.gov.au/hf/water/managing-water/water-affecting-activities-affecting-activities>