

Smart water

Consider ecosystems first in building, altering dams

with DAVID EAST



Smart facts

- ▶ Prescribed water surface, watercourse resources
- ▶ Important to understand definitions
- ▶ Pre-determine use of dam

STRICT regulations cover deepening, enlarging and cleaning out on-stream dams.

Before constructing a new dam or altering the in-flow design or an existing one, it is necessary to get approval under either the *Natural Resources Management Act 2004* or the *Development Act 1993*.

It must be remembered that any new dam development may impact on other water users and the environment (water-dependent ecosystems).

If there were no controls, 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, and increased salinity.
- Controls and regulations are needed to ensure the water resource is shared equitably between all water users and the environment.

There are two prescribed water surface and watercourse resources in the Adelaide and Mount Lofty Ranges Natural Resources Management Board's region and the Barossa and the Western Mount

Lofty Ranges Prescribed Water Resources Area – and specific rules apply to each.

There are also two prescribed surface water areas in the South Australian Murray Darling Basin Natural Water Resources Management Board's region: the Marne Saunders Prescribed Water Resources Area and the Eastern Mount Lofty ranges Prescribed Water Resources Area.

Usage

It is important to determine the use of the water from a proposed dam because different rules apply if it is to be used for stock and domestic use or commercial use, such as irrigation.

If the dam capacity is smaller than 5 megalitres and has a wall height less than 3 metres, a permit for a Water Affecting Activity from the Adelaide and Mount Lofty Ranges Natural Resources Management Board is required.

An engineering plan is a requirement of a WAA permit application and an ecological survey may be

required to assess the potential impact of a proposed dam in, or near, sensitive ecological communities.

WAA application forms are available from the board's website.

If the dam is bigger than 5m³, or has a wall height greater than 3m, or the dam is located in the hills' face zone, then a development approval from the local council must also be sought.

Water meters are not yet required for dams that are used to supply stock and domestic water, but in line with State and Federal Government policies, meters are required on dams where the water is licensed use (intensive animal farming, irrigation or industrial) in all prescribed water resources areas.

It is also important to know and understand the definitions covering dams.

Dams, walls or other structures that are not built across a watercourse or drainage path and are designed to hold water diverted, or pumped, from a watercourse, drainage path, aquifer or from another source are normally referred to as off-stream dams.

Dam, walls or other structures 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 –



If there were no controls, problems can result during the construction or alteration of a dam.

are normally referred to as on-stream dams.

A low-flow bypass is a structure, such as a small weir, used to direct low-stream flows around dams and back to their normal course of flow.

In this way, some water is retained in the stream to ensure that downstream environments, which may include fish, frogs and plants, may receive water to survive. This is known as an environmental flow.

A low-flow bypass is one of many conditions that may be included in permit for the construct of an on-stream dam.

It is strongly recommended that landholders download the relevant plan (Volume D of the Board Plan or appropriate water allocation plan) from the NRMB website to be clear about the principles that can apply in various circumstances.

These principles cover criteria including (but not limited to):

- Local soil conditions and salinity.

- Need for low flow by-passes.
- Remnant vegetation.
- Protection of aquatic ecosystems.
- Dam construction and design.
- Number and size of dams.
- Minimum flow requirements.
- Impacts on downstream users.
- Protection of habitat for threatened species.
- Special criteria relating to on-stream dams.

An NRMB officer may undertake a site inspection to determine if the site of the proposed dam is ecologically sensitive or prone to erosion and salinity.

Need to know more?
 Department for Water, Level 3, 25 Grenfell St, Adelaide, 08 8463 6800, www.sa.gov.au or www.waterforgood.sa.gov.au; AMLR NRM Board, 205 Greenhill Rd, Eastwood, SA 5063, 08 8273 9100, DENR.AMLR@sa.gov.au; SA MDB NRM Board, Mannum Rd, PO Box 2343, Murray Bridge, SA 5253, 08 8532 9100 or samdbrnmequiries@sa.gov.au



It's as important as shutting your gates...

Now is the time to prepare your property for bushfire.

Get online, call your local council or contact the CFS today to find out how you can make your property bushfire ready for next summer.

PREPARE. ACT. SURVIVE.



Bushfire Information Hotline
 1300 362 361 (TTY 133 677)
www.cfs.sa.gov.au

