

Farm Dams

FACT SHEET | JULY 2014

THINKING OF BUILDING A NEW DAM OR MODIFYING AN EXISTING DAM?

These are just some examples of "Water Affecting Activities" (WAAs) that may require a permit. This fact sheet provides important details on dam development in the South East Natural Resources Management Region and your obligations under the Natural Resources Management Act 2004 (the NRM Act).

WHY CONTROL DAM DEVELOPMENT?

New dam development can impact on existing water users and water-dependent ecosystems, and must be managed in a way that balances these existing needs with those for new development.

If there were no controls for the building of dams a number of problems could result:

- Reduced flows to downstream users;
- Reduced flows or changes to the timing of flows to ecosystems that depend on a certain flow regime;
- Erosion and/or sedimentation; and
- Increased salinity.

Rules are needed to protect existing downstream users and to ensure the resource is shared equitably between all water users and the environment, including native vegetation and native fauna.

PERMIT REQUIREMENTS

If the proposed dam has a capacity of less than 5 ML and a wall height of less than 3 metres above the natural ground surface, you will need to apply for a WAA permit from the South East Natural Resources Management Board (the Board). This includes dams for stock and domestic use. If the dam has a capacity of greater than 5 ML or has a wall height of greater than 3 metres from the natural ground surface, you must apply for development approval from your local council. The development application will be referred by the

council to the Board for direction, therefore a separate WAA permit application is not required in this case. The Board will provide direction to the council consistent with the policies and principles in the South East Regional Natural Resources Management Plan - Part 4: NRM Policy.

Before you lodge your application for a permit, we recommend that you contact the Board first to discuss the specifics of your application.

CRITERIA FOR ISSUING PERMITS

A dam application will be assessed against the principles and policies in the South East Regional Natural Resources Management Plan - Part 4: NRM Policy. We recommend you download Part 4: NRM Policy from the Board's website www.senrm.sa.gov.au to be clear about the principles that apply in your circumstances.

Morambro Creek Prescribed Area

There is one prescribed watercourse and surface water area in the South East, the Morambro Creek and Nyroca Channel Prescribed Watercourses including Cockatoo Lake and the Prescribed Surface Water Area (Morambro Creek Prescribed Area). Within this area, a water licence is required to divert water from the watercourse and specific permit policy relating to dams and other water affecting activities applies. An example is that in the Morambro Creek Prescribed Area, no more than 50 percent of the available flow, above the threshold flow rate, can be diverted from the watercourse at any time.

We recommend you download the Morambro Creek Water Allocation Plan from the Board's website to be clear about the principles that apply in your circumstances, or contact the Board office for further information.

Surface Water Policy Areas

There are a number of surface water policy areas within the Board's region, as shown in maps 1-12 of Part 4: NRM Policy:

- Tatiara/Nalang



- Morambro (existing adjacent to the Morambro Prescribed Area)
- Naracoorte
- Mosquito
- Regional Zones A-F
- Glenelg

Siting of a dam

On-stream dams must not be located:

- on the priority watercourses specified in maps 2-12 of Part 4: NRM Policy;
- on drains administered by or through the South Eastern Water Conservation and Drainage Board (SEWCDB) or Upper South East Dryland Salinity and Flood Management Program;
- on private drains constructed under a licence for private water management works issued by the SEWCDB.

For all other watercourses or flow paths not specified as priority watercourses, water should be diverted to an off-stream dam wherever possible.

Dam Capacity Limits

In the surface water policy areas and in the Morambro Prescribed Area there is a total policy area dam capacity limit (in ML) and an allowable volume (in ML/ha) per allotment, which is specified in Table 7 in Part 4: NRM Policy.

A permit for a new dam shall not be approved (except for stock and domestic dams in certain circumstances) in areas where the total policy area dam capacity and/or the total dam volume allowed on the allotment has been exceeded. No further approvals of dams (except for stock and domestic dams in certain circumstances) shall be made in the Mosquito Surface Water Policy Area.

In the Mosquito Surface Water Policy Area or where the total policy area dam capacity and/or the total dam volume allowed on the allotment has been exceeded, dams for stock and domestic purposes may only be constructed up to a maximum 2 ML capacity, if there is insufficient or inadequate water available on the property (as defined in Part 4: NRM Policy).

If you are proposing to enlarge an existing dam or

construct a new dam, the dam capacity proposed shall not exceed a volume (in ML) calculated by: area of the allotment (ha) X allowable volume specified for the relevant policy area (outlined in Table 7, column F in Part 4: NRM Policy) less the volume of any existing dams on the allotment.

Other criteria

It is a requirement that all on-stream dams include a low flow bypass mechanism, and that all dams include an overflow mechanism. In addition, any overflow from a dam, or flows that by-pass a dam must not be recaptured or diverted.

It is a requirement that structures designed to capture and deliver water to an off-stream dam must be designed, installed and operated to facilitate the capture of water to commence when 75% of the median annual flow record is reached at the specified gauging station (see Table 7, column H of Part 4: NRM Policy).

In addition, your permit application will be assessed against a number of criteria relating to dam design and construction, to ensure the dam has minimal impacts on riparian vegetation, soils, does not adversely impact on groundwater and will be structurally sound.

DEFINITIONS

What is an off-stream dam?

A dam, wall or other structure that is not constructed across a watercourse or drainage path and is designed to hold water diverted, or pumped, from a watercourse, a drainage path, an aquifer or from another source. Off-stream dams may also 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.



What is a low flow bypass?

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 riparian vegetation may receive water to survive (this is known as an environmental flow). A low flow bypass is one of many conditions that may be enforceable on your permit to construct an on-stream dam.

MEASUREMENTS

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.

For more information contact Natural Resources South East on 08 87351177

