

Barrage and Water Level Management Policy

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Government
of South Australia

Department for
Environment and Water

The Department for Environment and Water (DEW) will undertake management actions for the Lower Lakes Barrages in a transparent, evidence based and adaptive manner. These management actions seek to ensure the Coorong, Lower Lakes, and Murray Mouth (CLLMM) water levels and barrage outflows are sufficient to maintain the ecological character of the Coorong and Lakes Alexandrina and Albert Ramsar Wetland and ensure lake levels are sufficient to allow for delivery of water for Critical Human Water Needs and consumptive entitlement holders in the lower Murray. During normal operating conditions, water levels will be managed within a variable operating envelope of +0.5 metres to +0.85 metres AHD.

What guides this Policy?

The Policy is guided by the:

- *Water Act 2007 (Cth)* via the principles, objective and requirements of the Murray Darling Basin Plan, the Basin-Wide Environmental Watering Strategy and the *Murray-Darling Basin Agreement 2008*.
- *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* via the CLLMM Ramsar Management Plan.
- *Natural Resources Management Act 2004 (SA)* via the Water Allocation Plan for the River Murray and the Water Allocation Plan for the Murray Region.
- *River Murray Act 2003 (SA)* via the Lower Lakes, Coorong and Murray Mouth Environmental Water Management Plan, SA River Murray Annual Operating Plan, and the Long Term Environmental Watering Plan for the South Australian River Murray Water Resource Plan Area (see Sections 4 and 6).
- *Aboriginal Heritage Act 1988 (SA)* via the Meeting of the Waters registered heritage site, the Kungun Ngarrindjeri Yunnan Agreement, 2009 and Speaking As Country Deed, 2014.

Who is this Policy for?

This policy applies to DEW staff with responsibility for decision making with regards to providing advice on the management and operation of water levels and the barrages.

What is the scope of this Policy?

The Policy refers to the Lower Lakes Barrages that include the Goolwa, Mundoo, Boundary Creek, Ewe Island and Tauwitschere Barrages. Geographically, the operation of the Lower Lakes Barrages has an impact on water levels in the Lower River Murray (below Lock 1 at Blanchetown, SA), Lower Lakes, Coorong and Murray Mouth (Figure 1).

Where possible, critical lake levels will be maintained above 0.5 m and below 0.85 m AHD. Water availability and localised weather and tide conditions are permanent factors that significantly influence the management and operation of the Lower Lakes. From time to time there may be a departure from these levels, particularly when factors are beyond reasonable control, including periods of low water availability. If water levels in the Lower Lakes cannot be maintained above the critical point of +0.4m AHD, the planning phase of the *Drought Emergency Framework* (DEF) is triggered to preserve water levels in the Lower Lakes. The DEF and associated response measures take precedence over this Policy.

The purpose of the DEF is to guide decision making processes for the management of the Lower Lakes during periods of low water availability. Central to the DEF is the planning and action phase for measures to be introduced when water levels are forecast to decline below 0.4m AHD and the development of an early warning indicator which will be triggered when water levels are predicted to fall below 0.0m AHD. When this trigger is reached, a Murray–Darling Basin Jurisdictional High Level Steering Committee (HLSC) will be formed to provide sufficient lead-time to enable a well-considered management approach.

The underlying management objectives and principles for the DEF include:

1. avoid irreversible damage through acidification of the Lower Lakes system
2. consider the ecological risks of acid sulfate soil management options and as far as possible, avoid options that compromise mid to long term options
3. consider the impacts of salinity not only acidity
4. recognise that, as water level decreases, the acid risks increase and so do the costs of management actions
5. prevention of acid sulfate soil (avoiding exposure) is preferable to treatment or neutralisation.

The DEF requires that planning and management response activities be coordinated by the Murray–Darling Basin Authority (MDBA) and the Government of South Australia. Decisions concerning management responses, depending on their nature, will be guided by the Basin Officials Committee (BOC), the HLSC and other groups in order to make collective and considered decisions. At this point in time, some of the original objectives and outcomes sought through the Policy may not be met.



Figure 1. CLM region including barrages, Coorong, Lower Lakes and Murray Mouth.

What do I need to know?

The following principles guide water level management and barrage management actions:

- 1. Consistency with legislative objectives:** described in the *Water Act 2007 (Cth)* (Murray Darling Basin Plan, Basin-Wide Environmental Watering Strategy and Long Term Environmental Watering Plan for the South Australian River Murray Water Resource Plan Area), *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (Ramsar Management Plan), *River Murray Act 2003 (SA)* and *Aboriginal Heritage Act 1988 (SA)* (Meeting of the Waters registered heritage site as well as associated agreements including Kungun Ngarrindjeri Yunnan Agreement, 2009 and Speaking As Country Deed, 2014).
- 2. Maximise environmental benefits:** to achieve, where applicable, both short and long term, multiple objectives that improve and enhance environmental assets, water quality and ecosystem functions.
- 3. Utilise a risk-based approach:** that considers relevant social, cultural, economic, water quality and environmental implications of water level management and barrage management actions.
- 4. Apply the precautionary principle:** to mitigate threats of serious or irreversible damage to the CLLMM natural resources where there is a lack of scientific certainty.
- 5. Culturally and socially responsible management:** to have regard and respect for the values, perspectives and connections of local communities and in particular the Ngarrindjeri regarding the CLLMM region and associated commitments under the Ngarrindjeri Regional Partnership Agreement, 2008; Kungun Ngarrindjeri Yunnan Agreement, 2009; Ngarrindjeri Yannarumi (Speaking As Country Deed, 2014); Water Resource Planning Statement of Commitment, 2015; and the Cultural Knowledge Agreement, 2014.
- 6. Responsive and adaptive management:** to ensure clear objectives are set, that knowledge (including local knowledge), management, evaluation and feedback over a period of time is linked, that there is a commitment to learning and that decisions respond to evidence in a transparent manner as it becomes available. This is important in the context of our variable and changing climate.
- 7. Evidence based and transparent decision making:** to use the best available evidence for water level management, barrage management actions, and accounting for and reporting on water usage via a Decision Making Framework (DMF).
- 8. Management for consumptive use:** where possible, maintain water access for consumptive purposes, including for critical water human needs, and water access for entitlement holders below Lock 1.

Multiple objectives may be achieved by barrage management actions. Competing objectives will require prioritisation and associated decisions regarding barrage management actions will be informed by the above principles and will take into account the following criteria:

1. **Water demands:** The need for a particular hydrological regime will be informed by the condition of the environmental assets and consumptive demands. This will be a function of the frequency and effectiveness of historical barrage management actions.
2. **Water resource availability:** This includes the current and future availability of River Murray water resources informed by the MDBA's projections of South Australia's Entitlement and flows to South Australia, operational considerations, water held in storage and the availability of environmental water.
3. **Operational feasibility:** Operators will seek to achieve the highest priority objectives possible for the given resource availability and barrage management action operating conditions.
4. **Lessons learned:** Prioritisation will consider the outcomes of previous barrage management actions through transparent barrage management action review processes.

This Policy will be implemented consistent with the processes outlined in the Barrage Operating Strategy (BOS) and the Annual River Murray Operating Plan.

Approved:



John Schutz

CHIEF EXECUTIVE

Date: 14/8/19



Where do I get more information?

More information can be found on the [Coorong and Lower Lakes Ramsar Wetland Portal](#) and in the Barrage Operating Strategy.

Contact

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