

# Report on environmental watering coordination and principles – New South Wales

New South Wales' annual report on implementing the Basin Plan environmental management framework (Schedule 12, Item 10)

## Reporting context

The Basin Plan aims to protect and restore water-dependent ecosystems to support a healthy working Basin. To help achieve this, the Plan makes more water available for the environment and also guides how environmental watering is planned, coordinated and used at a Basin scale.

The processes for planning and delivering environmental water including principles to be applied when watering occurs are set out in the environmental management framework set out in Chapter 8 of the Basin Plan. It includes:

- processes to co-ordinate the planning, prioritisation and use of planned environmental water and held environmental water, under which:
  - the Authority is obliged to prepare a Basin-wide environmental watering strategy
  - each Basin State is obliged to prepare long-term watering plans for water resource plan areas
  - each Basin State is obliged to identify annual environmental watering priorities for water resource plan areas
  - the Authority is obliged to identify Basin annual environmental watering priorities (Division 5)
- the principles to be applied in environmental watering
- a mechanism to enable the Authority to co-ordinate the recovery of additional environmental water

The purpose of this report is to monitor how Basin governments are implementing the environmental management framework. The report is a requirement of Chapter 13 of the Basin Plan and relates to Item 10 of Schedule 12.

## Indicators for measuring success

Implementation of the environmental management framework is evaluated using the following indicators:

- Basin-wide environmental watering strategy, long-term watering plans and annual priorities were prepared as required (**Indicator 10.1**)
- Watering strategies, plans and priorities were prepared as required (**Indicator 10.2**)
- Environmental watering principles were applied (**Indicator 10.3**)

**Indicator 10.1:** Basin-wide environmental watering strategy, long-term watering plans and annual priorities were prepared, with the required content, published, reviewed and updated as obligated under Part 4 of Chapter 8, Divisions 2-5

Response
No response required from Authority or Basin States. CEWH report only.

**Indicator 10.2:** Watering strategies, plans and priorities are prepared consistently with Part 4 of Chapter 8, in relation to coordinating, consulting and cooperating with other Reports and the matters to which regard must be had (Chapter 8, Part 4)

Response
<p>NSW Office of Environment and Heritage (OEH) has identified the annual environmental watering priorities (AEWP) for surface water in each water resource plan area for 2014/2015, having had regard to the Basin Plan Part 4 of Chapter 8, Division 4 and the principles in Part 6 of Chapter 8. These priority statements outline how environmental water may be used in the coming year, depending on ecological and climatic factors and water availability.</p> <p>The AEWPs were developed by OEH Environmental Water Managers and their respective Environmental Water Advisory Groups (EWAGs) and are derived from the OEH annual environmental watering plans. The EWAGs include observers from all holders of environmental water, representatives of agencies responsible for planned environmental water, and representatives of holders of ecological assets (National Parks and Wildlife Services, private Ramsar site managers), as well as a diversity of peak and local stakeholder membership. Cooperative management of all held and planned water is therefore a key element of the prioritisation and planning.</p> <p>These priorities were provided to the MDBA in May 2014 and can be found on the <a href="#">NSW OEH</a> website at:</p> <p>No long-term watering plans commenced in 2013/2014.</p>

**Indicator 10.3:** Environmental watering principles are applied as set out in Division 6 of Chapter 8, Part 4

Response	
Principle	Description
<b>Principle 1:</b> Basin	OEH confirms that all environmental watering (EW) events in the NSW Murray Darling Basin in

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annual environmental watering priorities	2013/2014 were undertaken having had regard to the Basin AEWP. The purpose of each EW event and its degree of alignment with the 2013 Basin-wide AEWP is detailed in Matter 9.3.
<b>Principle 2:</b> Consistency with the objectives for water-dependent ecosystems	EW events in NSW aim to protect and restore water dependent ecosystems and their functions, and ensure that they are resilient to climate change and other threats. The methods used to achieve this are described in the annual environmental watering plans and priorities, which are produced for each water resource plan area. These priorities were composed in collaboration with the relevant EWAGs, had regard to the <i>Guidelines for the method to determine priorities for applying environmental water</i> , and are consistent with the objectives outlined in Part 2 of Chapter 8 of the Basin Plan.
<b>Principle 3:</b> Maximising environmental benefits	<p>OEH manages their environmental water holdings alongside other flows and demands within the system in order to maximise the likelihood of water reaching its target and achieving its desired outcomes. This is achieved through cooperative arrangements with the Commonwealth Environmental Water Office and State Water Corporation, and consultations with community and stakeholders through EWAGs. These collaborations help to minimise any potential adverse consequences of water delivery and maximise the benefits of applying environmental water.</p> <p>OEH completed a project to develop a decision support system (DSS) to assist decision-makers analyse complex problems, with a focus on significant inland wetlands. The DSS relates hydrological inputs to ecological response and increase the capacity to model the ecological implications of water sharing plans, therefore increasing the efficiency of water use whilst attaining the ecological objectives of the wetland.</p>
<b>Principle 4:</b> Risks	OEH appropriately identifies potential risks associated with delivering environmental water before it is released. All approvals for EW events must demonstrate adequate risk identification and mitigation strategies as prescribed in Form A (Request to deliver environmental water). Events are monitored, and any issues that arise during delivery of environmental water must be discussed in Form B (Environmental water delivery report), in addition to any outcomes from the risk mitigation and management actions that were employed.
<b>Principle 5:</b> Cost of environmental watering	<p>Consideration is taken for the costs associated with a watering event in the request to deliver environmental water (Form A).</p> <p>Consistent with the national water reform agenda, NSW government has committed to supporting the function of environmental watering and the costs attendant to undertaking this function. As per other NRM functions undertaken by government, cabinet determine to value of this function to the constituents of NSW via the NSW budgetary processes.</p>
<b>Principle 6:</b> Apply the precautionary principle	<p>Before every EW event, the potential environmental risks are identified and assessed (Form A). If the risks identified have the potential to cause environmental harm and cannot be managed, or the event will not contribute to maintaining or improving environmental condition, then it will not continue at that time.</p> <p>During EW events, monitoring is carried out to record any changes in water quality or environmental responses in order to trigger an appropriate response. These may include cessation of water delivery, changes to the timing, duration or inundation extent of the environmental water delivery, or use of dilution flows.</p>
<b>Principle 7:</b> Working effectively with local communities	Because of the highly effective mechanisms for community consultation that are established through EWAGs, NSW environmental water managers are able to tap into local knowledge and experience in order to improve the outcomes of EW events. Because this facilitates regular communication, OEH is able to recognise, respect, and respond to the needs of local communities and local environments.
<b>Principle 8:</b> Adaptive management	<p>Management of environmental water is necessarily adaptive due to natural changes in water availability. The purpose of OEH annual environmental watering plans is therefore to establish a framework for decision-making, rather than to prescribe specific management actions. This allows land and water managers to respond to changes in water resource conditions, in-stream flows and the specific ecological response to flows, and maximise the environmental outcomes from available water in any given set of circumstances. Additionally, any risk mitigation and monitoring that occurred during delivery is captured in the environmental water delivery report (Form B) so that water managers can learn from past events and adapt appropriately.</p> <p>The DSSs developed by OEH and their ability to model the ecological implications of water sharing plans will further facilitate adaptive management by providing a context for monitoring and improving performance.</p>
<b>Principle 9:</b> Relevant international agreements	<p>Relevant international agreements and commitments are acknowledged and represented in the environmental watering strategies. These strategies are outline in the annual environmental watering plans and priorities in order to ensure these outcomes are achieved. OEH is committed to improving and maintaining water dependent ecosystems that support the life cycles of species listed under the Bonn Convention, CAMBA, JAMBA and ROKAMBA.</p> <p>OEH is also responsible for ensuring that the ecological characteristics of declared Ramsar wetlands in NSW are maintained. This is achieved through partnerships with the Australian Government and the Ramsar Managers Network, which is a group of private landowners and government agencies responsible for managing Ramsar sites in NSW. The network meets regularly to discuss management of their respective sites and to develop initiatives for communicating the important values of wetlands and Ramsar sites.</p>
<b>Principle 10:</b> Other management and operational practices	All held environmental water is ordered and supplied in accordance with the rules within existing water sharing plans. Planned environmental water (including ECAs) is released in accordance with the operational rules of the existing water sharing plans and in collaboration with the relevant EWAGs.

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<p><b>Principle 11:</b> Management of water for consumptive use</p>	<p>All licenced water is ordered and supplied in accordance with the rules within existing water sharing plans.</p>
<p><b>Case study</b> (if available)</p>	<p>Over the 2012 to 2014 watering years, OEH worked closely with Crown Lands Division and the relevant EWAG to deliver 3,650 ML of environmental water to Bottle Bend Reserve in order to support Black Box woodland and wetland vegetation. The planning was consistent with the Basin Plan, the necessary risks were assessed, and regard was had to the <i>Guidelines for the method to determine priorities for applying environmental water</i>. As the target area had not received any natural flows for around 2 decades, it was identified as an area that would greatly benefit from environmental water.</p> <p>As a result of this delivered water, mature Black Box visually improved and new saplings started to emerge. Other wetland plants also responded and numerous waterbirds were sighted. The environmental flows improved the condition of scar trees in the reserve and benefited native ground-layer species, many of which are likely to be traditional food and medicine plants.</p> <p>The watering event also provided an opportunity for members of the Barkindji Maraura Elders Environment Team (BMEET) to assist OEH with ecological monitoring and cultural heritage surveys on the reserve. This resulted in a number of additional significant features being identified, such as canoe trees, burial sites and fireplaces. OEH hopes to continue providing similar opportunities within the community over the coming years.</p>