

# Matter 10 - Report on environmental watering coordination and principles – NSW

The NSW 2014–15 annual report on implementing the Basin Plan environmental management framework (Schedule 12, Item 10)

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## 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 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; and
  - 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 with the required content and are published, reviewed and updated, **(10.1)**
- Watering strategies, plans and priorities are prepared in consultation with other parties and having regard to matters as required **(10.2)**
- How environmental watering principles are applied **(10.3)**

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**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 (CEWH only)**

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N/A

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

**10.2.1. Describe how coordination, consultation and cooperation occurred including with other governments**

**Response**

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NSW has identified the annual environmental watering priorities (AEWP) for surface water in each water resource plan area for 2015/2016, 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

The AEWPs were developed through Environmental Water Advisory Groups (EWAGs) and are derived from the 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. Preparation of the AEWPs also involved consultation with the Commonwealth Environmental Water Office (CEWO).

These priorities were provided to the MDBA in May 2015 and can be found on the NSW Office of Environment and Heritage (OEH) website at:

<http://www.environment.nsw.gov.au/environmentalwater/planning-reporting.htm>

**10.2.2. Describe what difference coordination, consultation and cooperation made**

**Response**

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Developing the AEWPs in coordination and consultation with NSW government agencies and respective EWAGs meant that stakeholder's concerns were addressed throughout the process, there was overall greater cooperation between stakeholders involved and the AEWPs were developed in accordance to Chapter 8, Part 4 of the Basin Plan.

Cooperative management of all held and planned water is therefore a key element of the prioritisation and planning.

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**10.3:** How environmental watering principles were applied, consistently with Division 6 of Chapter 8, Part 4

**10.3.1. Provide at least one case study that demonstrates how environmental watering principles were applied and identify the relevant principles.**

**Response**

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Principle	Description
<p><b>Principle 1:</b> Basin annual environmental watering priorities</p>	<p>NSW confirms that all environmental watering (EW) events in the NSW Murray Darling Basin in 2014/2015 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.</p>
<p><b>Principle 2:</b> Consistency with the objectives for water-dependent ecosystems</p>	<p>EW events in NSW aim to protect and restore water dependent ecosystems and their functions, and ensure 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 developed 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.</p>
<p><b>Principle 3:</b> Maximising environmental benefits</p>	<p>NSW manages its 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 CEWO and WaterNSW, 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>NSW has developed a decision support system (DSS) to assist decision-makers analyse complex problems, with a focus on significant inland wetlands including the Gwydir Wetlands, Macquarie Marshes and Narran Lakes. The DSS relates hydrological inputs to ecological response and increases the capacity to model the ecological implications of water sharing plans, therefore increasing the efficiency of water use while attaining the ecological objectives of the wetland.</p>
<p><b>Principle 4:</b> Risks</p>	<p>NSW 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.</p>

Principle	Description
<p><b>Principle 5:</b> Cost of environmental watering</p>	<p>Consideration is taken for the costs associated with a watering event in the request to deliver environmental water via a Form A.</p> <p>Consistent with the national water reform agenda, the NSW government has committed to supporting the function of environmental watering and the costs attendant to undertaking this function.</p>
<p><b>Principle 6:</b> Apply the precautionary principle</p>	<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>
<p><b>Principle 7:</b> Working effectively with local communities</p>	<p>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, NSW is able to recognise, respect, and respond to the needs of local communities and local environments.</p>
<p><b>Principle 8:</b> Adaptive management</p>	<p>Management of environmental water is necessarily adaptive due to natural changes in water availability. The purpose of NSW annual EW 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 ability of the DSS to model the ecological implications of water sharing plans will further facilitate adaptive management by providing a context for monitoring and improving performance.</p>

Principle	Description
<p><b>Principle 9:</b> Relevant international agreements</p>	<p>Relevant international agreements and commitments are acknowledged and represented in the EW strategies. These strategies are outlined in the annual EW plans and priorities in order to ensure these outcomes are achieved. NSW 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>NSW is committed to 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>
<p><b>Principle 10:</b> Other management and operational practices</p>	<p>All held environmental water is ordered and supplied in accordance with the rules within existing water sharing plans. Planned environmental water (including environmental contingency allowances) is released in accordance with the operational rules of the existing water sharing plans and in collaboration with the relevant EWAGs.</p>
<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></p>	<p>Over the 2014/15 watering year, NSW Office of Environment and Heritage worked closely with Crown Lands Division (Fivebough and Tuckerbil Wetland Advisory Committee) and the relevant EWAG to deliver 2,474 ML of environmental water to Fivebough and Tuckerbil Swamps in the MIA Wetlands. These areas were targeted for top-up flows during September 2014 in order to maintain suitable waterbird feeding and breeding habitat for JAMBA and CAMBA migratory species.</p> <p>Planning for the event was consistent with the Basin Plan, the necessary risks and costs were assessed (Form A) and regard was had to the <i>Guidelines for the method to determine priorities for applying environmental water</i>. Proposals to water these wetlands were also included in the 2014/15 Murrumbidgee Annual Environmental Watering Priorities (AEWPs), the Basin AEWPs and listed as a priority for EW under the Ramsar Convention.</p> <p>This delivered water maintained and improved wetland-dependent vegetation within these areas</p>

Principle	Description
	<p>(including river red gums) and provided suitable habitat and feeding conditions for waterbirds. These conditions ultimately resulted in the convergence of thousands of waterbirds on Fivebough and Tuckerbil Swamps for feeding, foraging and in some cases, breeding. This was one of the largest flocks of waterbirds in 20 years. Species observed at these sites as a result of this watering included Australasian and Little Bitterns, Egrets, Gull-billed Terns, Brolgas, Swamp Harriers and Sea Eagles.</p> <p>Overall the ecological response to environmental watering in the MIA Wetlands during 2014/15 was positive.</p>