

Information collection template for water year 2018–19 (MDBA)

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The Murray-Darling Basin Authority (MDBA) 2018–19 Annual Report to satisfy reporting obligations for:

- Basin Plan Schedule 12 responses (except Matter 9.3 – use of environmental water, which is reported separately).
- Basin Plan Implementation Agreement (BPIA) self-assessment of progress with implementation tasks.

Reporting context

This reporting template addresses the MDBA’s Basin Plan annual reporting obligations for the 2018-19 water year. It includes annual reporting as required under Schedule 12 of Basin Plan, as well as reporting against the 2018-19 requirements of the Basin Plan Implementation Agreement.

The completed report will be reviewed by the Independent Audit Committee for completeness and accuracy.

In completing the template you are encouraged to refer to previously published material where appropriate, so as to maintain consistency and minimise any additional reporting burden. In this respect, it may also be useful to consider last year’s completed reporting template as a starting point.

Matter 4: Risk Management

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
The effectiveness of the management of risks to Basin water resources (s4.03)		
<p>M4.1 Implementation and management of the risk strategies under s4.03 (3) of the Basin Plan.</p> <p><i>Applicable to Schedule 12 Matter 4, Indicator 4.1 and BPIA Task 39.1</i></p>	<p>M4.1) Describe how regard was had to the risk strategies.</p>	<p>The MDBA had regard to the risk strategies identified in the Basin Plan, and other identified risk through its work program. Activities include:</p> <ul style="list-style-type: none"> • supporting independent review of fish deaths at Menindee Lakes; • continuing to improve regulatory and compliance capabilities, including reviewing major risks to Basin Plan and Water Act compliance, in consultation with MDBA Independent Assurance Committee • assessing and reporting on the water delivery shortfall risk through the hot, dry summer of 2018-19, and continuing to work with Basin governments to examine capacity and shortfall risk across the River Murray system and tributaries. • conducting and planning for reviews or evaluations of implementation of the Basin Plan. <p>Further information is available in the MDBA corporate annual report 2018-19 available at: https://www.mdba.gov.au/publications/mdba-reports/MDBA-annual-report</p>
Strategies to manage or address identified risks (s4.03)		
<p>M4.2 Identify research priorities to address risks to Basin water resources.</p> <p><i>Applicable to BPIA Task 39.2</i></p>	<p>M4.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will, through the Basin Plan Implementation Committee – Water Resource Plan Working Group, identify research priorities to improve knowledge of the impact of climate change, interception activities, land use, floodplain harvesting, peri-urban and industrial take on Basin water resources in a manner consistent with the National Water Knowledge and Research Platform.</p>	<p>The MDBA is identifying research and knowledge priorities to address risks and strategic gaps through its Knowledge Framework and Knowledge Collaboration Strategy. The Knowledge Framework is being used to integrate and prioritise areas of knowledge identified by MDBA staff and stakeholders. These include: hydrology, and hydrological modelling; GIS and remote sensing; climate change; and social, economic and cultural factors.</p> <p>The Knowledge Collaboration Strategy identifies and tracks key knowledge needs which require or depend on collaborations between the MDBA and external parties, and supports the MDBA Knowledge Framework. The Strategy assists with identifying opportunities for co-investment and funding opportunities.</p>
Guidelines to assist in implementing risk strategies (s4.04)		
<p>M4.3 Develop guidelines that provide further</p>	<p>M4.3) Responses should address the following requirement(s) as</p>	<p>Guidelines for meeting Basin Plan requirements for Water Resource Plans under parts 14</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>advice on actions that may be taken to implement the risk strategies listed.</p> <p><i>Applicable to BPIA Task 40.1</i></p>	<p>outlined in the Basin Plan Implementation Agreement:</p> <p>If required, the MDBA will develop guidelines in consultation with BPIC and the BPIC – Water Resource Plan Working Group.</p>	<p>and section 10.46 have been developed in consultation with Basin states. These have been published https://www.mdba.gov.au/publications/policies-guidelines/water-resource-plans-what-they-are-how-they-are-developed.</p> <p>Two Position Statements covering risk assessment methods and strategies have been developed and endorsed by the Authority to provide guidance to states in addressing relevant Chapter 10 requirements. These Position Statements are made publicly available on the MDBA website and have been distributed to BPIC and WRPWG.</p> <p>Compliance and enforcement policy 2018–21</p>

Matter 6: Local Knowledge and Stakeholder Engagement

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>The extent to which local knowledge and solutions inform the implementation of the Basin Plan.</p>		
<p>M6.1 The outcome of engagement on the implementation of the Basin Plan.</p> <p><i>Applicable to Schedule 12 Matter 6, Indicator 6.1</i></p>	<p>M6.1) Please describe the process and outcomes of local engagement for key BP implementation activities in 2018-19 with particular reference to:</p> <ul style="list-style-type: none"> • Water Resource Plans • Environmental Watering • Other key Basin Plan implementation activities. 	<p>First Nations environmental watering guidance project</p> <p>The MDBA and Commonwealth Environmental Water Holder (CEWO) are collaborating on projects that provide for First Nations' input into environmental water planning. By engaging First Nations in a collaborative design process, the MDBA and CEWO hope to foster a partnership with NBAN and MLDRIN and establish an enduring mechanism for inclusion of First Nation objectives into Basin environmental water planning. The project will also have a focus on knowledge sharing and building capacity within the federal and First Nation agencies. Traditional Owners, through NBAN and MLDRIN, are also involved in the review and update of the Basin-wide environmental watering strategy.</p> <p>MLDRIN have produced a collaborative design report that details the constraints and opportunities for water literacy and capability development for Nations. This information will assist government organisations improve how they engage with and empower Nations. They are now finalising a detailed and focused consultation schedule to collate information on First Nations environmental objectives, leveraging off planned workshops and engagement activities.</p> <p>NBAN are in the process of engaging Nations to participate in the First Nations Environmental Watering Guidance project. This process includes identifying Nation working groups and key contacts and obtaining and managing the free and prior informed consent of participating Nations. They are now finalising a work plan to collect, identify and collate information to inform the development of First Nations environmental objectives in the northern Basin.</p> <p>Water Resource Plans</p> <p>Chapter 10, Part 14 of the Basin Plan requires a Water Resource Plan (WRP) to identify the objectives of Indigenous people in relation to water resource management, and the outcomes for management sought by Indigenous people. A water resource plan must be prepared having regard to the views of relevant Indigenous organisations with respect to</p>

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<i>The extent to which local knowledge and solutions inform the implementation of the Basin Plan.</i>		
		<p>a number of matters, such as cultural flows.</p> <p>Basin jurisdictions are responsible for engagement with Aboriginal Nations in the preparation of WRPs. The MDBA continues to support Basin jurisdictions by providing advice on engagement protocols, including Aboriginal Nations relevant to specific WRP areas. Additionally, the MDBA continues to support NBAN and MLDRIN in their assessment (along with relevant organisations and Aboriginal Nations) of whether consultation undertaken by Basin jurisdictions in the development of WRPs meets the requirements of Chapter 10, Part 14.</p> <p>Cultural Flows</p> <p>Project officers commenced with MLDRIN and NBAN in 2018-19, to work with First Nations over the next three years to translate the findings of the National Cultural Flows Research Project into practical and effective ways forward. In particular, the project officers are working with First Nations people to implement the cultural flows assessment methodology developed in the project in each Nation. It is expected that at the end of the project, Traditional Owners will have developed cultural flows management plans or have otherwise articulated cultural flow requirements for their Nations. The MDBA manages contracts with NBAN and MLDRIN that support this work, and continues to provide advice and support with project implementation.</p> <p>Aboriginal Weather Watchers Project</p> <p>The aim of the Aboriginal Weather Watchers Project was to understand the impact of the weather (and natural resource condition more generally) on the everyday lives of Aboriginal people in the Murray-Darling Basin. Over a 2-year period, field interviews were undertaken with 15 Aboriginal participants located throughout the Basin, exploring recent weather phenomena and impacts. Two interview rounds took place in 2018-19 (another interview round was undertaken in 2017-18). The MDBA is currently preparing a final report for the project and aims to distribute the findings to participants and relevant Aboriginal stakeholders.</p>

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<i>The extent to which local knowledge and solutions inform the implementation of the Basin Plan.</i>		
		<p>Environmental Water Coordination engagement</p> <p>Process: Environmental water holders use regionally relevant networks to engage with local communities. This occurs via groups such as Environmental Watering Advisory Groups in NSW, Catchment Management Authorities in Victoria, and the Community Advisory Panel in South Australia.</p> <p>Engagement groups are led by Basin jurisdictions and collect input and feedback from community representatives, government agencies, land and waterway managers, scientists and Traditional Owners. Community information and views are used as an input into watering proposals developed by jurisdictions as part of their annual planning each year. This flows through to coordinated planning across all environmental water holders through the Southern Connected Basin Environmental Watering Committee.</p> <p>Water management can be complex, and it doesn't help that different agencies use a mix of terminologies when communicating about the use of water. This creates unnecessary confusion, inconsistencies and therefore barriers to improving community understanding. An environmental water holder collaborative project started in 2017–18, and continued in 2018-19, that brought together twelve government agencies at various government levels in order to learn from targeted market research and develop an overarching communications framework for water for the environment.</p> <p>This included commitment from all five environmental water holders plus seven state government and regional catchment management agencies to seek new ways to improve individual and shared communications efforts. Working together to better communicate the importance of healthy waterways and the role that water for the environment plays. In 2018-19 a communications manager was engaged to support agencies to implement the framework, funded collaboratively by all environmental water holders.</p> <p>Example outcomes: As an example, environmental water holders worked together in 2018-19 to develop a communication strategy to support the multi-site Southern Spring Flow event for the River Murray and its key wetlands in 2019-20. This included developing shared messages on why water for the environment is needed in dry times, and a commitment to regular and transparent communication and local community engagement. The Commonwealth Environmental Water Holder is taking the lead with</p>

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		<p>proactive community engagement and collecting local insights and is the central contact point for regular public updates on behalf of all environmental water holders involved. https://www.environment.gov.au/water/cewo/catchment/southern-spring-flow-2019</p> <p>An update of the water for the environment information on the MDBA website, including new annual icon site condition report cards, has been completed to better meet audience communication needs. https://www.mdba.gov.au/managing-water/water-for-environment/progress-outcomes</p> <p>Considering Indigenous values in environmental water planning: engagement activities and outcomes</p> <p>The Living Murray Indigenous Partnerships Program (IPP) is an initiative established by Joint Governments to support Indigenous contribution to the planning and management of key sites and environmental watering activities. The IPP facilitates exchanges of knowledge, information, perspectives and histories at each of the sites across government and non-government groups. A review of the program in 2017–18 identified significant achievements by the program in supporting Indigenous engagement in site management and environmental water planning.</p> <p>Following the 2017-18 review of the IPP and in response to the emerging need for improved engagement with First Nations, Ministerial Council endorsed ongoing funding for the IPP as part of the non-RMO joint programs budget. A key finding of the review which supported this decision was that the IPP is, and continues to be, an impressive and effective model of maturing engagement with First Nations people.</p> <p>In 2018–19, the IPP has continued to support genuine and culturally appropriate engagement with First Nations people in the use of water for the environment. Through a range of activities and projects, First Nations groups have worked together with agencies to plan water use, connect to Country, share knowledge between generations, participate in two-way exchanges between Cultural science and Western science, provided learning and training opportunities and undertaken cultural practice at key sites along the River Murray. IPP activities have also complemented other funding programs such as the Barapa Barapa Water for Country project at Gunbower Forest, and the Working on Country Ranger Program at Chowilla floodplain and the Coorong in South Australia.</p> <p>In May 2019, Indigenous Facilitators participated in The Living Murray Icon Site Manager</p>

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<i>The extent to which local knowledge and solutions inform the implementation of the Basin Plan.</i>		
		<p>Forum held in Nagambie, Victoria. The Indigenous Facilitators presented alongside Icon Site Mangers, giving a holistic site update which included cultural perspectives on locations and activities. Taungurung representatives (Traditional Owners of Country which includes part of the Goulburn River) presented on cultural science including the recording of Taungurung creation stories and the origins and reclamation of birthing trees.</p> <p>The participation of IPP Indigenous Facilitators in The Living Murray Icon Site Manager forums has been an overwhelming success, facilitating information exchange across sites and providing an enriching, supportive and respectful learning experience for all involved.</p> <p>Autumn is the peak planning period for environmental water holders. The IPP has facilitated meaningful engagement of First Nations People in the planning of water for the environment use for 2019-20, applying the principles of free, prior and informed consent. Sharing of information about water planning, use and monitoring is a key focus for Icon Site Managers and Indigenous Facilitators, and many have held planning meetings, including meetings on-Country, to identify watering priorities of Cultural significance.</p> <p>There are strong links between water for the environment use and cultural practice. In June 2019, the Yorta Yorta Nation Aboriginal Corporation held a basket weaving workshop in Barmah forest, using a particular species of grass. The project provided a rewarding experience for those involved and is an example of the link between water, ecology, people and Culture.</p> <p>The IPP supports the identification, monitoring and protection of Aboriginal cultural values at all icon sites where possible. Mapping and monitoring of values, such as scar trees, middens, burials and the monitoring of totem species is a key focus for many sites. In May 2019, a quite delicate and sensitive project was completed along the Edward River in Millewa Forest. Aboriginal ancestral remains had been identified as being impacted by river bank erosion over some time, requiring the ancestral remains to be exhumed and repatriated to a more secure and protected location. Aboriginal community representatives worked together on-Country with NSW DPIE, NSW National Parks and Wildlife Service and MDBA to undertake this delicate and sensitive task in a respectful and culturally appropriate way. On site, stories were shared between the groups, from old to young, with time to bond by the river in between the work. In a report back to MDBA from NSW DPIE: 'this project successfully fulfilled the wishes of the Aboriginal Traditional Custodians through meaningful engagement, conservation and protection of these highly</p>

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		<p>significant and sensitive sites, and provided peace of mind for their descendants they now rest in a safe place.'</p> <p>The Edward River project made the most of relationships strengthened through the successful completion of an Aboriginal Waterways Assessment in Millewa forest in November 2018. In what is suggested as one of the first formal assessments in NSW, around 18 Aboriginal community representatives took part in the assessment. A number of values were recorded including contemporary stories associated with use of areas, use of resources, and significant Aboriginal heritage sites around the wetlands. This information may be used to guide future water delivery to sites that are culturally important. An article in the Riverine Herald about the assessment noted that 'the gathering was a powerful chance for neighbouring communities to work together for positive change.'</p> <p>Examples of how the IPP engagement and activities contributed to a range of outcomes across icon sites in 2018–19 include:</p> <p>Connection to Country - at all Living Murray sites, activities have supported the connection or reconnection to land and water for First Nations people. It is these continued opportunities to connect with people and Country which supports respectful and meaning engagement about site management including use of water for the environment. The Aboriginal Waterways Assessment at Millewa forest and site tours at Chowilla and Lindsay-Mulcra are examples of this.</p> <p>Intergenerational learning - opportunities to provide knowledge from Elders to younger generations, and vice versa, is provided whenever there are activities to meet on-Country. The burial site work at Millewa is an example of this.</p> <p>Two-way learning between Aboriginal science and Western science at sites where opportunities are available for First Nations People to participate in monitoring activities. The monitoring of totem species at Gunbower forest and fish monitoring at the Coorong are examples of this.</p> <p>Cultural practice at sites where water for the environment creates, or has the potential to create cultural benefits from environmental outcomes. The basket weaving workshop in Barmah is an example of this, as well as a canoe and scar tree created in Gunbower forest in response to water for the environment use.</p>

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<i>The extent to which local knowledge and solutions inform the implementation of the Basin Plan.</i>		
		<p>Employment, training and learning opportunities are created whenever participation in activities such as monitoring, site protection, or pest plant and animal control are required. In addition to this, relationships between agencies and First Nations People also allows other opportunities for learning and development. An example of this is North Central CMA providing work experience for Traditional Owner mentees.</p> <p>Working together across groups, organisations and agencies to deliver outcomes and gain a better understanding of different perspectives. This occurs across every site and is essential to delivering water for the environment. The IPP also works with other programs, including the Working on Country ranger program in South Australia. A video of the two cultural rangers at Chowilla was developed and released in 2018-19 and is available on the MDBA website.</p>

Matter 10: Environmental Watering

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Basin annual environmental watering priorities (ss8.27 - 8.31, 8.04 - 8.07, 8.14(2) (a) (i), 8.49 - 8.51, 8.33 - 8.43, 8.53 - 8.59; Schedules 8 & 9)		
<p>M10.1 Prepare Basin annual environmental watering priorities each year, with the required content, published, reviewed and updated as obligated under Chapter 8, Part 4, Divisions 2-5</p> <p><i>Applicable to Schedule 12 Matter 10, Indicator 10.1 and BPIA Task 51.1</i></p>	<p>M10.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>a) In consultation with Basin States and the CEWH, the MDBA will review the framework for development of Basin annual environmental watering priorities, based on feedback and evaluation of previous year's priorities.</p> <p>b) The MDBA will provide advice to Basin States in developing their annual environmental watering priorities, if requested.</p> <p>c) The MDBA will consult with environmental water holders and Basin States on the proposed Basin annual environmental watering priorities through the BPIC – Environmental Watering Working Group.</p> <p>d) The MDBA will have regard to the annual environmental watering priorities provided by the Basin States.</p> <p>e) The MDBA will develop the draft Basin annual environmental watering priorities via multilateral consultation through BPIC – Environmental Watering Working Group, and bilateral consultations with Basin States and the CEWH.</p> <p>f) The MDBA will publish the Basin annual environmental watering priorities.</p>	<p>a. The MDBA sought feedback from members of BPIC's Environmental Watering Working Group (EWWG) on the Basin annual environmental watering priorities (the priorities) for 2018-19 (published in June 2018). This was done primarily by seeking feedback directly from EWWG members with the goal of improving priorities and the process for developing them for the next water year. Feedback included a view that publishing the outlook earlier would better assist environmental water holders and planners in developing their watering plans for the forthcoming water year. As a result, the MDBA brought forward publication of the outlook from early April to mid-February 2019. The earlier publication also allowed the outlook to guide the actions of environmental water holders in response to the fish deaths that occurred in the northern and southern Basin in the summer of 2018-19.</p> <p>b. The MDBA did not receive any requests from the Basin states to provide advice for the preparation of state annual watering priorities.</p> <p>c. The MDBA consulted environmental water holders and Basin states, and other agencies and stakeholders in developing the outlook and the priorities for 2019-20 water year. This included consulting on a draft of the outlook and taking account of advice received before releasing a final outlook in mid-February 2019. The MDBA provided a draft of the 2019-20 priorities to the EWWG and considered feedback before finalising the priorities for publication.</p> <p>d. The MDBA considered the Basin states' annual watering priorities provided to it in May 2019 and found that the state priorities generally complemented the Basin-wide priorities. No watering priorities were received from the Australian Capital Territory.</p> <p>e. As mentioned above, EWWG, Basin states and the Commonwealth Environmental Water Holder (CEWH) were consulted during the development of the 2019-20 outlook and 2019-20 priorities. In response to feedback in previous years about the challenges of balancing competing priorities, the MDBA modified its approach to providing guidance for achieving the priorities in 2019-20. This involved drawing together guidance for sites with multiple ecological needs (flows and connectivity, native vegetation, waterbirds and native fish).</p>

		<p>This approach more explicitly identified where competing demands might occur for particular assets and sites. The MDBA acknowledges that further work is needed to better support environmental water managers in prioritising competing ecological needs to achieve Basin-scale outcomes for water-dependent ecosystems, particularly in dry conditions.</p> <p>f. The MDBA published the Basin annual environmental watering priorities for 2019-20 on 25 June 2019.</p>
	<p>The MDBA will seek stakeholder feedback on the process for developing Basin annual environmental watering priorities to inform the process in the following year.</p>	<p>The MDBA conducted a review of the process for developing the priorities for 2018-19. This included seeking feedback from external stakeholders including members of the EWWG including and undertaking an internal review.</p> <p>During 2018-19, MLDRIN and NBAN signed contracts with the MDBA and CEWO respectively to progress the development of First Nations' environmental water guidance. This work, which is scheduled to be completed in 2020, will assist environmental water holders, managers and river operators to have regard to Aboriginal values and uses in planning and delivering water for the environment. The outcome of this work will also inform the development of the Basin-wide environmental watering strategy 2022 edition</p>
	<p>g) The MDBA will evaluate whether priorities are met, based on annual reporting requirements and reporting of where Basin annual environmental watering priorities are not followed and review the prioritisation framework and process.</p>	<p>The following advice was provided by the States in relation to whether the Basin annual environmental watering priorities for 2018-19 had been met:</p> <p>Victoria: the Victorian Environmental Water Holder (VEWH) has aligned all environmental watering undertaken in 2018-19 with the Basin annual environmental watering priorities, except for one delivery of water for the environment at Hattah Lakes. In July 2018 and June 2019, a total of 281.1 ML of water for the environment was used for pump maintenance at Hattah Lakes. The environmental water used was authorised by the VEWH in line with its Seasonal Watering Plan 2018-19 and with the authority of the SCBEWC (The Living Murray holdings were used). The pump maintenance is entirely for operational maintenance and there were no environmental watering objectives for the watering, therefore this environmental watering was not in accordance with the Basin annual environmental watering priorities.</p> <p>South Australia: Management and delivery of planned and held environmental water was consistent with the Basin Plan, including the environmental watering plans principles to be applied to environmental watering.</p> <p>NSW: All events were in accordance with Basin annual environmental water priorities.</p> <p>Queensland: All environmental watering was in accordance with all the 2018-19 Basin annual watering priorities.</p> <p>ACT: The ACT provided environmental water in accordance with the Basin annual watering priorities.</p>

The implementation of the environmental management framework (Chapter 8, Part 4)		
<p>M10.2 Watering strategies, plans and priorities are prepared consistently with Chapter 8, Part 4 in relation to coordinating, consulting and cooperating with other Reporters and the matters to which regard must be had (Chapter 8, Part 4)</p> <p><i>Applicable to Schedule 12 Matter 10, Indicator 10.2</i></p>	<p>M10.2) Please describe progress in coordinating, consulting or cooperating with other Basin jurisdictions on the management and delivery of environmental water and opportunities for improvement.</p>	<p>The Southern Connected Basin Environmental Watering Committee (SCBEWC) is the forum that supports coordination of environmental water delivery across multiple water holders and jurisdictions in the Southern Basin. SCBEWC brings together agencies to coordinate and manage environmental water across the Commonwealth, New South Wales, Victorian and South Australian governments.</p> <p>In order to streamline planning processes and avoid duplication, SCBEWC incorporates two distinct functions: the coordination of environmental water across the southern connected Basin (facilitation), and decision making on a number of jointly held water portfolios and joint natural resource management program elements. This approach ensures effective coordination across multiple water portfolios while allowing different environmental water holders to make independent decisions.</p> <p>Key to the effectiveness of SCBEWC is its broad membership, collaboration and consultation - providing all relevant stakeholders involvement and shared responsibility in the effective and efficient management of water for the environment. To improve transparency and accountability, the SCBEWC annual report on progress in coordinating environmental water planning and use has been made available online in 2018-19: https://www.mdba.gov.au/sites/default/files/pubs/SCBEWC-water-for-the-environment-annual-report-2017-18.pdf</p> <p>This includes sections reporting on communication, community involvement, strengthening First Nation Partnerships, how SCBEWC had regard to Basin annual watering priorities, processes for annual planning, outcomes from water use and coordination, and opportunities for improvement.</p> <p>SCBEWC develops operational scenarios before the start of each watering year to assist with coordinating the use of environmental water and identifying commitments for water held as part of the joint portfolio under The Living Murray and Snowy Scheme River Murray Increased Flows (RMIF). The SCBEWC operational scenarios are also prepared as an input to inform the planning assumptions in the River Murray Annual Operations Outlook. This ensures the major environmental water actions under a range of resource scenarios are incorporated into the Outlook which explains how the MDBA may operate the River Murray system across a range of possible climatic and rainfall scenarios. https://www.mdba.gov.au/publications/mdba-reports/river-murray-system-annual-operating-plan.</p> <p>During the year, environmental water holders regularly communicate to discuss the potential for initiating coordinated watering actions and monitoring the progress of current actions.</p> <p>SCBEWC planning considers a range of matters including:</p> <ul style="list-style-type: none"> • Requirements of the Basin Plan including the Basin-Wide Environmental Watering

		<p>Strategy and Basin Annual Environmental Watering Priorities,</p> <ul style="list-style-type: none"> • Having regard to Water quality targets in s9.14 (and the draft flow management guideline in development for s9.14) • SCBEWC agreed operating, channel capacity and coordination principles • Watering proposals under a range of water availability scenarios (dry to wet), • Regular discussion of opportunities for coordination amongst environmental water holders and broader planned river operations, • Identification of potential delivery constraints and risks and mitigation strategies. <p>Environmental water managers and river operators have committed to improving coordination during annual planning and real-time delivery. An annual review of the SCBEWC environmental water planning process and opportunities for improvement is undertaken and the planning process updated each year.</p> <p>A key area of recent improvement is the River Murray Channel watering proposal which aims to describe the environmental watering requirements right along the river channel. This work is an important development in moving planning from site based to considering system scale needs and supports testing approaches to deliver water following natural cues, including the coordination of tributary and Murray environmental flows. Shaping multi-site spring flows along the River Murray and its tributaries allows longitudinal connectivity of water through the system for native fish movement, use of environmental infrastructure to divert water into priority wetland sites (lateral connectivity) and to provide end-of-system flows for holding the Lower Lakes and Coorong at minimum water levels. Supplying end-of-system flows are critical to support Basin Plan connectivity targets, and to keep lake levels high enough to help limit the re-emergence of acidification, heavy metal release from sediments and extreme salinities that happened during the millennium drought.</p>
<p>M10.3 How environmental watering principles were applied consistent with Chapter 8, Part 4, Division 6.</p> <p><i>Applicable to Schedule 12 Matter 10, Indicator 10.3</i></p>	<p>M10.3) Provide at least one case study that demonstrates how environmental watering principles were embedded in the decision-making process and identify the relevant principles. Please note it is not necessary to address each of the 11 Principles individually. Responses can include links to published case studies for further detail.</p> <p>Please provide reasons for any environmental watering that was not undertaken in accordance with the Basin annual watering priorities listed at Att. A (partially/fully), in accordance with Section 8.44 of the Basin Plan and Principle 1.</p>	<p>Environmental water holders plan and coordinate the delivery of water for the environment in the Southern Connected Basin consistent with the environmental watering principles and with regard to the Basin annual watering priorities.</p> <p>Principle 1: Environmental watering to be undertaken having regard to the Basin annual environmental watering priorities</p> <p>Principle 2: Consistency with the objectives for water-dependent ecosystems</p> <p>Principle 3: Maximising environmental benefits</p> <p>Principle 4: Risks</p> <p>Principle 5: Cost of environmental watering</p> <p>Principle 6: Apply the precautionary principle</p> <p>Principle 7: Working effectively with local communities</p> <p>Principle 8: Adaptive management</p> <p>Principle 9: Relevant international agreements</p> <p>Principle 10: Other management and operational practices</p> <p>Principle 11: Management of water for consumptive use</p>

		<p>Case study: Delivering water to Gunbower and multi-site outcomes (Principles 1, 2, 3, 4, 6, 7, 8, 9)</p> <p>Following two very hot and dry summers and signs of emerging forest condition stress, 51.8 GL of water for the environment was delivered to Gunbower Forest from mid-June to October 2018. The water inundated about 4,500 ha of the forest floodplain, flood runners and wetlands. Planning for the delivery had regard to the Basin annual environmental watering priorities and objectives for water-dependent ecosystems as part of the watering proposal submitted to SCBEWC.</p> <p>Prior to the delivery, rigorous seasonal water planning was done by the Victorian Government, through the North Central Catchment Management Authority (CMA). This included considering environmental benefits and risks and adaptive management.</p> <p>The Gunbower Community Reference Group is the primary mechanism for engaging the community and stakeholders on annual environmental watering and complementary works programs. The group plays a critical role in ensuring that the planning incorporates local community knowledge and expertise. It also provides an avenue for the dissemination of information to the broader community, in particular the purpose of environmental water actions and the associated outcomes.</p> <p>Gunbower Forest Traditional Owners are specifically consulted to consider shared outcomes for both the environment and Traditional Owners through culturally informed environmental water delivery</p> <p>The flows into the Ramsar listed Gunbower Forest improved the health of the river red gum forest habitats. Understorey communities within inundated areas had greater coverage of aquatic, amphibious and mudflat plant species compared to areas that remained dry. The managed flows also supported many species of waterbirds to breed and successfully fledge their young. While surveys in September and October 2018 found limited signs of colonial waterbirds nesting, surveys in December 2018 found over 50 nests (about 150 juveniles present) including Australasian darters, Australian ibis, little pied cormorants, little black cormorants and great cormorant species. Most chicks fledged successfully by January 2019.</p> <p>The river management rules, set by the states, were used to provide return flows to deliver water across multiple environmental sites. These rules are regularly reviewed and input data (such as gauged flows into the forest) improved to ensure the river can be managed for multiple objectives, including the objectives in Chapter 2 of the Basin Plan.</p> <p>As an example of maximising the environmental benefit of delivering water for the environment, between June and November 2018, 289 GL of water for the environment, coordinated across a number of environmental water holders, was delivered in the Goulburn and Campaspe rivers. Most of this water was accounted as passing into the River Murray to improve flows along the length of the river.</p> <p>To maximise outcomes the return flows from the Goulburn and Campaspe were used at downstream sites, including to support the 51.8 GL use at Gunbower Forest, where about 40 GL of return flows was used with the remainder of the use met with environmental water allocations in the River Murray. As the Gunbower Forest was inundated, the creeks returned water back to the River Murray with about a third of the water delivered returning</p>
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		<p>to the river.</p> <p>Of the total water for the environment delivered in the Goulburn and Campaspe rivers from June to November, about 93% flowed all the way to the Lower Lakes, Coorong and Murray Mouth to help connect the Lower Lakes with the North Coorong estuary. This gave fish more opportunity to move across the barrages to feed and breed, improved salinity levels, and helped maintain Lower Lakes levels to support threatened native fish that live in the fringing lake vegetation.</p> <p>This type of use of water for the environment multiple times down the length of the river is important to maximise the outcomes of the water recovered to support the Basin Plan.</p> <p>Further information (Principles 1, 2, 8, 9, 10, 11)</p> <p>Watering actions had regard to the Basin annual environmental watering priorities and objectives of the Basin Plan as part of the planning process undertaken by SCBEWC. This includes the watering proposals developed before the year starts including linkages between watering actions and the Basin annual priorities. Many of the sites where environmental water is delivered are Ramsar listed sites of international significance. Sites also include important wetlands and a number of those, including the Lower Lakes, Coorong and Murray Mouth are important for the life cycles of international migratory bird and threatened species.</p> <p>Environmental watering proposals submitted to SCBEWC identified a range of risks associated with watering actions, and proposed appropriate mitigation measures. The watering proposals were assessed as part of operational scenarios developed by SCBEWC. This ensures environmental water holders collectively assess plans and the quantity and quality of water required for the range of proposed actions and any need to consider prioritisation if there is not enough water available or the water cannot be delivered in a pattern that supports the environmental water needs due to system operating constraints.</p> <p>Adaptive management principles were applied throughout the planning and delivery of jointly held environmental water in 2018-19:</p> <ul style="list-style-type: none"> • Long-term condition monitoring and emerging intervention monitoring results were used to develop and assess environmental watering proposals at the April 2019 SCBEWC planning workshop. • Real-time decision-making allowed managers to respond to changing river and climatic conditions. These were informed through operational advisory groups. • Validation and recalibration of a number of models occurred with the input of measured data from the watering events. These processes help to ensure and maintain model accuracy and planning usefulness. • Bi-annual Icon Site Managers meetings where managers share and learn from recent successes and challenges faced at each of their respective sites. This enables the different site managers to learn and improve management practices more quickly and effectively.
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<p>Basin-wide environmental watering strategy (ss8.13 - 8.17 & 8.49 - 8.51; Schedules 8 & 9)</p>		
<p>M10.4 Prepare a Basin-wide environmental watering strategy.</p> <p><i>Applicable to BPIA Task 50.1</i></p>	<p>M10.4) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will review and update the Basin-wide environmental watering strategy in consultation with environmental water holders, Basin States and stakeholders at intervals not exceeding five years.</p>	<p>The <i>Basin-wide environmental watering strategy (the strategy)</i>, first published in 2014, must be reviewed and updated no later than five years after it was first made (no later than 24 November 2019).</p> <p>In 2017-18, the MDBA commenced preliminary work on reviewing and updating the strategy. In 2018-19 the review was completed and drafting of an updated strategy commenced.</p> <p>A comprehensive review was conducted to inform the update. The review included internal and external consultation. In the latter case, the MDBA consulted with science and policy experts, environmental water holders and managers, including through the Environmental Watering Working Group (EWWG) and through the MDBA's formal communities of practice. As part of the review, around 140 individuals and groups were invited to complete an online survey about the strategy.</p> <p>Survey responses, along with the findings from internal and external consultation, informed a report of the review, which was completed in April 2019.</p> <p>In order to avoid triggering a review of state long-term environmental watering plans that are still being developed, the MDBA determined that the 2019 review should not make substantial changes to the overarching goals and objectives. However, the review did highlight key issues to be considered when a full review is undertaken in 2022.</p> <p>The MDBA used the findings of the review to prepare an update to the strategy (2019 edition). These updates include:</p>

		<ul style="list-style-type: none"> • reinforcing the importance of constraints relaxation and implementation of pre-requisite policy measures • refining water management strategies to promote greater collaboration between water managers • a clearer explanation of how monitoring, evaluation, reporting and improvement are undertaken in Basin Plan evaluations • the approach to considering climate change, and • adaptive management <p>The third edition of the strategy will be published in 2022 and will have material changes. It will capture learnings from the 2020 review of the Environmental Water Plan as well as the 2020 Evaluation of the Basin Plan, Updates for the 2022 strategy will include:</p> <ul style="list-style-type: none"> • First Nations’ objectives and outcomes for shared benefits of environmental water • improved SMARTness (Specific, Measurable, Achievable, Relevant, Time-bound) of expected environmental outcomes • assessment of climate change vulnerability and risks, with subsequent adjustments to expected environmental outcomes and water management strategies. <p>The draft updated 2019 strategy was released for public comment on 2 August until 2 September. Feedback will be assessed as the MDBA finalises the 2019 update, which will be published in November 2019.</p> <p>During the public consultation period, the MDBA met members of the EWWG to discuss their feedback on the draft updated strategy.</p>
<p>M10.5 Conduct a review of the environmental watering plan</p> <p><i>BPIA task 73.1</i></p>	<p>M10.5) The MDBA will scope the review of the environmental watering plan.</p>	<p>The MDBA is required to review the Environmental Watering Plan (EWP) before the end of 2020 and every five years thereafter. The EWP sets out:</p> <ul style="list-style-type: none"> • environmental objectives and targets for water-dependent ecosystems • a framework for managing planned and held environmental water • methods to identify priority environmental assets and priority ecosystem functions • principles and methods to be applied when prioritising the application of environmental water, in line with the requirements of s.28 of the <i>Water Act (2007)</i>. <p>Section 13.09 of the Basin Plan Guidance provides direction on how the Authority should conduct the review. A review of the targets set out in Schedule 7 is mandatory; however, the decision to extend beyond them is at the MDBA’s discretion.</p>

		<p>In 2018–19 the MDBA started a review, focusing on external stakeholders. So far the review has explored:</p> <ul style="list-style-type: none">• innovative governance and planning frameworks• how knowledge on best practice in planning and natural resource management may have changed since the EWP was last drafted• the perspectives of key stakeholders on how the EWP operates on the ground• the implications of particular clauses for practitioners. <p>The findings and recommendations of the external review will be used to guide the MDBA's internal review in 2020.</p>
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Matter 13: Critical Human Water Needs

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<i>The implementation, where necessary, of the emergency response process for critical human water needs.</i>		
<p>M13.1 The number of days in the water accounting period that Tiers 1, 2 and 3 water sharing arrangements have been applied.</p> <p><i>Applicable to Schedule 12 Matter 13, Indicator 13.1</i></p>	<p>M13.1) Provide a summary of the number of days that tiers 1, 2 and 3 water sharing arrangements have been applied during 2018/19.</p>	<p>Tier 1 water sharing arrangements were in place for the entire 2018-19 water accounting periods.</p>
<i>Process for managing risks to critical human water needs associated with inflow prediction (s11.07)</i>		
<p>M13.2 Assess the risks of insufficient conveyance water, insufficient water for the conveyance reserve, and the water quality and salinity triggers been reached. Determine whether any advances under the Murray-Darling Basin Agreement are required.</p> <p><i>Applicable to BPIA Task 63.1</i></p>	<p>M13.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will assess and manage the risks to critical human water needs associated with inflow prediction and in conducting its river operations functions.</p> <p>The Annual Operating Plan and monthly Water Resource Assessments consider risks to critical human water needs associated with a range of water availability/inflow scenarios including the risk of insufficient conveyance water, conveyance reserve or where the water quality and salinity triggers are reached under the range of water availability/inflow scenarios.</p> <p>Each determination of annual water availability is calculated using data and models agreed to by each of the Basin States.</p> <p>The MDBA will consider the risk to critical human water needs of any advances under clause 102C or Schedule H. If advances are required, or forecast to be required, the Annual Operating Plan will identify and assess any risks to critical human water needs associated with making these advances.</p>	<p>To manage risks to critical human water needs associated with inflow prediction, MDBA regularly reviews its predictions and adjusts to reflect current conditions. This is done through periodic review of the Annual Operating Plan and the assumptions used in preparing the fortnightly Water Resource Assessments, in consultation with the Water Liaison Working Group.</p> <p>During all water resource assessments for 201-19 and versions of the Annual Operating Plan, sufficient resource water available to meet the conveyance water, conveyance reserve and was of suitable water quality under all inflow scenarios.</p>
<p>M13.3 Undertake water resource assessments.</p>	<p>M13.3) Response should confirm or update on the following statement:</p>	<p>The MDBA is required, under the Objectives and outcomes for river operations in the River Murray System, to prepare water resource assessments monthly or at more</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p><i>Applicable to BPIA Task 63.2</i></p>	<p>The MDBA prepares Water Resource Assessments, usually monthly but may be more frequent if conditions are very dry. As part of the preparation of the assessments, the MDBA regularly reviews its inflow scenarios, in consultation with the Water Liaison Working Group.</p>	<p>frequent intervals approved by the Committee. Since the Millennium Drought, MDBA has been providing these assessments fortnightly for the majority of the water accounting periods to support the states in making their fortnightly allocation announcements. No changes to the inflow statistics were warranted as inflows were not near minimums.</p>
<p>Risk management approach for inter-annual planning for critical human water needs arrangements (s11.08)</p>		
<p>M13.4 Undertake inter-annual planning for critical human water needs.</p> <p><i>Applicable to BPIA Task 64.1</i></p>	<p>M13.4) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA's risk management approach for inter-annual planning for critical human water needs is based on: the conveyance reserve under s11.12(2); the range of inflows predicted under s11.06; the risk management processes under s11.07; the efficient operation of the River Murray System and the <i>Objectives and Outcomes for River Operations in the River Murray System</i>; monitoring and forecasting of water quality data in the River Murray System; and communication between the MDBA, Basin States and private providers of water quality data.</p> <p>From January to June each year the MDBA prepares a forecast of the water available in the next water year. This second year forecast will be based on the matters listed under s11.08 (1) of the Plan. The Water Resource Assessments are prepared in consultation with the southern Basin States, through the Water Liaison Working Group.</p> <p>The MDBA will use information from the existing River Murray Water Quality Monitoring Program as the basis for identifying water quality risks to critical human water needs.</p> <p>When making decisions about the volume of water available to the Basin States in a particular year, and whether water can be set aside for the conveyance reserve, the MDBA must have regard to the Water Resource Assessments which form the basis for decisions on the water available to Basin States, including if water can be set aside for the conveyance reserve.</p>	<p>The MDBA undertook informal second year water resource assessments from early 2019 for 2019-20, and continued these assessment through until the formal 2nd year assessment provided in April 2019. At all times during these assessments, there was sufficient water to meet the conveyance for 2019-20 and the conveyance reserve for 2020/21 and not periods of water quality forecasted through operations that would have trigger Tier 3.</p>
<p>Commencement and cessation of Tier 2 water sharing arrangements (ss11.09 & 11.10)</p>		
<p>M13.5 Determine if the trigger is reached and Tier 1 or 2 applies.</p>	<p>M13.5) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA, through the preparation of the Water Resource Assessment, will determine if the triggers detailed in BP s11.09 have been reached, or</p>	<p>The MDBA published a notice on the water sharing arrangements on the MDBA website, found here: https://www.mdba.gov.au/river-information/water-sharing/critical-human-water-needs. This states the system is currently under Tier 1 arrangements.</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p><i>Applicable to BPIA Task 65.1</i></p>	<p>if the appropriate conditions apply.</p> <p>The MDBA will publish a notice on its website declaring that:</p> <ul style="list-style-type: none"> • Tier 1 water sharing arrangements cease and Tier 2 water sharing arrangements commence; or • Tier 2 water sharing arrangements cease and Tier 1 water sharing arrangements commence. <p>The <i>Guideline on the triggers and process for moving between water sharing Tiers</i> provides more information on how the MDBA will communicate a change in water sharing arrangements to the Basin States and Commonwealth.</p>	
<p>Commencement and cessation of Tier 3 water sharing arrangements (ss11.15 & 11.16)</p>		
<p>M13.6 Determine if the trigger is reached and Tier 3 applies.</p> <p><i>Applicable to BPIA Task 66.1</i></p>	<p>M13.6) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA, through the preparation of the Water Resource Assessment will determine if the appropriate conditions apply. If New South Wales, Victoria or South Australia considers the triggers have been reached, its BOC member should advise the Executive Director, River Management Division, MDBA.</p> <p>The MDBA will publish a notice on its website declaring that:</p> <ul style="list-style-type: none"> • Tier 1 or Tier 2 water sharing arrangements cease and Tier 3 water sharing arrangements commence; or • Tier 3 water sharing arrangements cease and Tier 2 water sharing arrangements commence; or • Tier 3 water sharing arrangements cease and Tier 1 water sharing arrangements commence. <p>If conditions require water sharing arrangements to change from Tier 3 to Tier 1, the MDBA will declare that Tier 2 arrangements commenced when Tier 3 arrangements ended but ceased immediately afterwards.</p> <p>The <i>Guideline on the triggers and process for moving between water sharing Tiers</i> provides more information on how the MDBA will communicate a change in water sharing arrangements to the Basin States and Commonwealth.</p>	<p>Not applicable for 2018/19</p>

Matter 14: Water Quality and Salinity Management

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Chapter 9 Guidelines (s9.13)		
<p>M14.1 Prepare and publish guidelines relating to water quality targets.</p> <p><i>Applicable to BPIA Task 57.1</i></p>	<p>M14.1) The BPIA notes that MDBA will prepare a proposal for consideration by BPIC for a new guideline providing additional guidance in relation to flow management decisions by the MDBA, BOC and Basin States and when making decisions about the use of environmental water by the CEWH and other environmental water holders and managers. BPIC will then decide the process for the guideline to be developed.</p>	<p>Work on this task was kept on hold until the Basin Salinity Management 2030 (BSM2030) strategy was developed and approved by Ministerial Council in November 2015. Since November 2015, MDBA, with the input from river managers, developed an initial draft guideline for 'having regard' to salinity and other water quality targets (dissolved oxygen and cyanobacteria).</p> <p>In 2016, the Basin Plan Implementation Committee (BPIC) agreed to the MDBA proposal that consultation on the draft guideline to be carried out through the Basin Salinity Management Advisory Panel (BSMAP), the Water Liaison Working Group (WLWG) and the Environmental Watering Working Group (EWWG). In addition, the MDBA included the Southern Connected Basin Environmental Watering Committee (SCBEWC) in the consultation process because this operational committee is comprised of environmental water and/or river operations representatives from the Australian, New South Wales, South Australian and Victorian governments and the MDBA river operators.</p> <p>The MDBA consulted with BSMAP, EWWG, WLWG and SCBEWC in 2018-19 to produce a revised version of the guideline which was approved by the Authority and published.</p> <p>https://www.mdba.gov.au/sites/default/files/pubs/flow-management-guideline.pdf</p>
Implementation of the water quality and salinity management plan, including the extent to which regard is had to the targets in Chapter 9 when making flow management decisions		
<p>M14.2 Progress with implementation of the Basin Plan <i>Water Quality and Salinity Management Plan</i> (BP CH9) and outcomes, including having regard to the targets on dissolved oxygen, recreational water quality and levels of salinity when managing flows.</p> <p><i>Applicable to Schedule 12, Matter 14, Indicator 14, and</i></p>	<p>M14.2) Context: BP ch9.14 recognises that flow management, in some circumstances, can assist with the management of water quality issues, such as salinity, hypoxic black water events and blue green algal outbreaks. The intent of s9.14 is that 'having regard' to these risks and opportunities becomes part of business as usual when making decisions about flow management or the use of environmental water. Other actions that can also address water quality issues include coordination and communication about blue green algal outbreaks (in line with BP9.18) or hypoxic black water events.</p> <p>In this context, please describe how these water quality issues were considered, when making decisions about flow management or the use of environmental water, and/or other actions; did this make a difference to these water quality issues, and any learnings to inform continuous improvement.</p>	<p>Regard to water quality target exceedance</p> <p>Under the basin-wide Basin Salinity Management 2030 (BSM2030) strategy, MDBA coordinates the review of elevated salinity events to examine the causes, impacts and effectiveness of management responses and to identify potential policy improvements. Throughout 2018-19, BSMAP determined there were no elevated salinity events that warranted further review.</p> <p>In April/May 2019 salinity levels at Milang increased above BP target level (1,000 EC) to 1,040 EC, but over the past 5 years Milang salinity remained below the target level for more than 95% of the time.</p> <p>The Southern Connected Basin Environmental Watering Committee (SCBEWC) watering proposal for the Lower Lakes Coorong and Murray Mouth included a range of demands under all climate scenarios to support the ecological objectives of the site and the Basin Plan targets for salinity in Lake Alexandrina to not exceed 1,000 EC for 95 % of the time and less than 1,500 EC all the time.</p> <p>In what was a difficult delivery year in 2018-19, environmental water holders and river</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
BPIA 54.1		<p>operators worked together to find opportunities to deliver environmental water to support ecological outcomes and meet water quality targets. Delivery of return flows from upstream watering actions and additional direct environmental water orders at the SA border during summer and autumn assisted to support the intent to maintain Lower Lake salinity level below the Basin Plan salinity target level and achieve a range of environmental outcomes for the Lower Lakes Coorong and Murray Mouth.</p> <p>Environmental water management</p> <p>A range of procedures and tools have been developed to consider water quality risks, and ensure that the MDBA has regard to the targets in s9.14 of the Basin Plan, when making decisions about the use of environmental water. SCBEWC has a risk management strategy to identify, evaluate and control risks associated with coordinating the delivery of environmental water and a framework for managing salinity spikes. Jointly held environmental water has been delivered to support the health of the River Murray for over 10 years and a range of management arrangements and tools have been developed to assist decision making.</p> <p><u>Watering proposals</u></p> <p>The planning and delivery processes for environmental water in the southern connected Basin has regard to the Basin Plan water quality targets. When developing watering proposals, using the tools outlined below, jurisdictions and site managers are asked to assess the risk of proposed watering actions and identify appropriate mitigation strategies. These watering proposals are reviewed by the SCBEWC as part of the annual water planning, including when deciding on use of jointly-held water for watering actions.</p> <p><u>Operating plans for environmental works</u></p> <p>In collaboration with partner governments and icon site management authorities, operating plans have been developed to guide the use of the environmental works at Gunbower–Koondrook–Perricoota Forest, Hattah Lakes and the Chowilla Floodplains–Lindsay–Wallpolla Islands. These operating plans assist environmental water managers to effectively and efficiently deliver water as well as manage risks (including water quality risks) related to operation of the environmental works.</p> <p><u>Modelling</u></p> <p>Operational and hydrodynamic models are used to inform watering activities at the icon sites with environmental works. These models simulate the operation of the works to produce information about areas of inundation, water usage, impacts on downstream flows and water quality.</p> <p>A blackwater model for the River Murray and Edward–Wakool rivers is used to predict downstream Dissolved Oxygen (DO) levels during watering activities, assisting water managers and river operators to manage low DO (which can kill fish and other aquatic</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		<p>animals) during environmental water delivery. The model provides an assessment of the predicted DO levels from the inundation of major floodplains of Barmah-Millewa Forest, and Gunbower-Koondrook-Perricoota forests. This modelling capability is also being extended to South Australian floodplains, including the Chowilla Floodplain.</p> <p><u>SCBEWC operational salinity risk management framework</u></p> <p>A salinity risk management framework is in place to use when planning and delivering environmental water to high salinity risk sites. The framework allows salinity risks and mitigation and/or monitoring measures to be identified, including cumulative risks from multi-site watering activities. Selected measures will depend on a range of factors at the time of delivery. Some important measures include hydrograph manipulation, improved coordination of water deliveries and dilution flows.</p> <p>There is a hydrodynamic model for the Lower Lakes, Coorong and Murray Mouth. This model is used to consider different environmental water delivery scenarios and how different delivery patterns and lake operating practices can influence lake levels and salinity in the lakes and Coorong.</p> <p><u>Monitoring</u></p> <p>Monitoring of water quality issues is primarily undertaken using joint-funded water monitoring stations, to inform both operations and environmental water planning or delivery activities.</p> <p>Other sources of data are available from state-based staff who record water quality data from spot readings during watering actions at icon sites.</p> <p><u>Operational Advisory Groups (OAGs)</u></p> <p>OAGs support operational decisions on the real time management of environmental water delivery at the Icon Sites. OAGs include representatives from state agencies, state water authorities, river operators, icon site managers, environmental water managers and scientists.</p> <p>Before and during watering events, OAGs meet on a regular basis to discuss a range of operational matters including flow management, inundation extents, risk management, ecological responses, engineering issues, fishway operations and water accounting.</p> <p>Emergency response to water quality issues and fish deaths</p> <p>In 2018–19, fish deaths resulting in due to hypoxic (low oxygen) water quality conditions occurred across many parts of the Basin with those occurring in the lower Darling receiving widespread media attention. Fish deaths also occurred in the Murrumbidgee River. Environmental water holders were able to be responsive to deteriorating water quality conditions in the lower Murrumbidgee and prevented further mass fish deaths through delivering elevated base flows over the summer months, but active management</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		<p>of water in the lower Darling was not an option.</p> <p>An action plan was developed in January 2019 to highlight how Basin governments were working together to mitigate fish death risks, including a recommended action plan to manage the risk of future fish deaths - https://www.mdba.gov.au/sites/default/files/pubs/Response-fish-death-events-recommended-action%20plan-2019_0.pdf</p> <p>LOWER DARLING An independent panel was appointed by the Australian Government, to assess fish death events in December 2018 and January 2019. A preliminary report and early advice and recommendations was provided to the Australian Government Minister for Agriculture and Water Resources on 20 February 2019. The final report was released in April 2019, along with a summary of the report findings. https://www.mdba.gov.au/publications/mdba-reports/response-fish-deaths-lower-darling.</p> <p>In the lower Darling, a water quality monitoring program was implemented from January to May 2019. The data gathered from monitoring, funded as part of the Joint Venture under the emergency response provisions in the Murray-Darling Basin Agreement, provided near real-time information to NSW Fisheries staff, while also supporting the evaluation of the efficacy of different types of aeration technology. The learnings from this monitoring are informing preparations for the summer of 2019-20. The MDBA worked with the community, Central Darling Shire Council and NSW DPI Fisheries to contribute towards the costs of installing, operating, monitoring and removing the aerators, through use of River Health Joint Venture Funding under the MDB Agreement. Expert water quality advice suggests that the deployment of aerators in the lower Darling provided refuge habitat for native fish and likely prevented further fish deaths. https://www.mdba.gov.au/sites/default/files/pubs/Independent-report-stratification-mixing-and-fish-deaths-in-the-Lower-Darling-River.pdf</p> <p>MURRUMBIDGEE From January to April 2019, approximately 26 GL of water for the environment was delivered to provide refuge flows to the lower Murrumbidgee River. This action was successful, with dissolved oxygen levels significantly improving and no further reports of mass fish deaths. The coordinated action comprised 16 GL from the jointly-held Living Murray portfolio, 5 GL of Commonwealth water and 5 GL of NSW Environmental Water Allocation. Lessons from the Murrumbidgee weir pool stratification in the summer of 2018-19 have been written up by Professor Darren Baldwin and will soon be made publically available on the MDBA website.</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>M14.3 Conduct a review of the water quality targets in the water quality and salinity management plan</p> <p><i>BPIA task 73.1</i></p>	<p>M14.3) The MDBA will scope the reviews of the water quality and salinity management plan targets in consultation with the BPIC – Monitoring and Evaluation Working Group. The review of the water quality and salinity management plan targets must include a review of salinity targets and target sites. The review of the environmental watering plan must include a review of targets.</p>	<p>Section 13.08 of the Basin Plan requires the MDBA to conduct a review of the water quality targets (as set out in Chapter 9, Part 4 of the Basin Plan) in the water quality and salinity management plan every five years after commencement of the Basin Plan.</p> <p>The first review was due in 2017, however, an Independent Review of the Water Act in 2014 made a number of recommendations about re-phasing and aligning the five-yearly and ten-yearly reviews that were legislated in the Basin Plan. The rationale was that a delayed start date would provide more meaningful results, given that full implementation of the Basin Plan will not be achieved until 2019, or, in the case of SDLAM, 2024.</p> <p>To give effect to these recommendations, Parliament passed the <i>Water Amendment (Review Implementation and Other Measures) Act 2016</i> on 4 May 2016 and the due date of the first review was rescheduled from 2017 to the end of 2020.</p> <p>The review of water quality targets has commenced with the development of a project plan and is being led by the MDBA's Water Quality and Salinity team. This review will consider alternative water quality targets proposed by states when developing the Water Resource Plans (WRPs), and the recommendations of the Productivity Commission and 2017 Basin Plan evaluation.</p>
<p>M14.4 Monitor salinity levels at five sites on a daily basis and report at the end of each water accounting period. Is salinity at reporting sites consistent with the salinity targets in s9.14(5)?</p> <p><i>Applicable to Schedule 12 Matter 14, Indicator 14.3, and</i></p> <p><i>BPIA Task 54.2</i></p>	<p>M14.4) The MDBA will assess whether the salinity targets have been met over the period that consists of that water accounting period and the previous four water accounting periods. This will include an analysis of data at reporting sites against target values in s9.14(5).</p> <p>Once this assessment has been carried out the MDBA will publish this assessment on its website.</p>	<p>Salinity levels at the five reporting sites (Lock 6, Morgan, Murray Bridge, Milang and Burtundy) were monitored continuously over the five-year reporting period (2014–2019). The targets are deemed to have been met if the percentage of days above the target is less than 5%, or the salinity has been below the target 95% of the time.</p> <p>Over the reporting period (July 2014–June 2019), the assessment indicates the targets have been met at all reporting sites except at Burtundy.</p> <p>The target value at Burtundy is 830 EC. Over the reporting period, the salinity at Burtundy was above the target for 46% of days. This is a 10% increase on last year's result which stems from recent drought conditions and low inflows across much of the northern Basin. Salinity levels were consistently above the target value from 23 November 2018 through 2 June 2019, peaking at 1226 EC on 25 May 2019. Low or no flows from 7 to 29 April and 3 to 30 June 2019 also meant that salinity levels could not be recorded during these times.</p> <p>The details of the assessment of the achievement of targets at the five reporting sites will be published along with the Basin Plan Annual Report 2018–19.</p> <p>The 2017 Basin Plan Evaluation recommended that the review of the water quality and salinity targets in the Basin Plan scheduled for 2020 should examine the appropriateness of salinity targets, particularly at Burtundy in light of progress on implementing protection of environmental water in the northern Basin.</p>
<p>Salt export objective (s9.09)</p>		

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>M14.5 Adequacy of flushing to provide salt export. Conduct an annual assessment of the extent to which the salt export objective is met against the indicative figure of a minimum 2 million tonnes per year.</p> <p><i>Applicable to Schedule 12 Matter 14, Indicator 14.4, and BPIA Task 53.1</i></p>	<p>M14.5) Estimated number of tonnes of salt exported from the River Murray System to the Southern Ocean, with an explanation of adequacy of flushing in the context of broader flow and salinity management in the Basin.</p> <p>As per BPIA requirements, the MDBA will annually estimate salt export using Method 3 (BMT WBM 2-D hydrodynamic model in consultation with the BPIC – Water Resource Planning Working Group and the BPIC – Water Quality Taskforce) and publish the estimate on its website.</p> <p>Please see BPIA obligations for further information about applicable methods over time.</p>	<p>Over the three-year period July 2016 to June 2019, the annualised rate of salt export over the barrages is 0.94 million tonnes per year. This is lower than the indicative figure of 2 million tonnes per year referred to in the Basin Plan.</p> <p>Flushing salt from the river systems helps avoid salt accumulation and adverse impacts on water users. Flushing salt also supports healthy river and floodplain ecosystems. Salt interacts with in-stream biota (animals and plants), changing the ecological health of streams and estuaries.</p> <p>Generally, more salt is flushed out to the ocean during wet years and less salt is flushed out in dry years. The level of salt flushing in a year is also impacted by river regulation, irrigation diversions and current levels of development, including salt interception works.</p> <p>The 2017 Basin Plan Evaluation recommended that the 2020 Basin Plan water quality targets review should examine the appropriateness of the salt export objective as an indicator of adequate flushing of salt from the river system in the context of a variable climate. The review could consider how salt export objectives can be varied to deal with periods of low flow.</p> <p>The details of the assessment of the achievement of salt export objective will be published along with the Basin Plan Annual Report 2018–19.</p> <p>Consistent with the BPIA, the approach used to estimate salt export in this report is Method 2 which is described in MDBA Technical Report 2013/09. The Method 2 requires South Australian diversion data. With timely availability of this data, the application of Method 2 is now streamlined.</p> <p>The refinement of the approach for estimating salt export objective (using Method 3) will be considered by the MDBA following examination of the appropriateness of the salt export objective as recommended by 2017 Basin Plan Evaluation.</p>
Application of salinity targets for the purposes of long-term salinity planning and management (s9.19)		
<p>M14.6 Apply salinity targets in the Murray–Darling Basin Agreement for salinity planning and management and report on the Implementation of measures to achieve end of valley targets (s9.19)</p> <p><i>Applicable to Schedule 12 Matter 14, Indicator</i></p>	<p>M14.6) The MDBA, Basin Officials Committee and Basin States are to undertake any long-term salinity planning and management functions in accordance with the targets in Appendix 1 of Schedule B, including the Basin Salinity Management Strategy Operational Protocols.</p> <p>Please indicate how this is done.</p> <p>Note that reporters may refer to Basin Salinity Management 2030 Strategy reporting to meet this reporting requirement, in line with the Schedule 12 Reporting Guidelines.</p>	<p>On behalf of the Basin States, the MDBA reports on this indicator regarding the types of measures that the Basin States and MDBA have implemented to make progress towards the end-of-valley targets set for long-term salinity planning and management.</p> <p>In 2018–19, the following activities were undertaken:</p> <ul style="list-style-type: none"> • Joint works and measures (salt interception schemes - SIS) were operated and maintained to divert salt away from the Murray and Darling rivers and from adjacent floodplain areas. The operation of the SIS made a significant contribution to maintaining river salinity at levels consistent with the targets.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>14.5, and BPIA Task 56.1</p>		<ul style="list-style-type: none"> • Basin states have implemented measures such as improved irrigation practices, rehabilitation of irrigation infrastructure, and salinity management plans or land and water management plans. These measures contributed to the achievement of basin salinity target at Morgan. • Salinity modelling tools were reviewed and updated to improve the accounting of actions that have significant salinity impacts on the river. These tools assist the assessment of entries in the salinity registers which provide an account of river salinity impacts in terms of salinity credits and debits. • New Basin Salinity Management Procedures are being prepared. These procedures will provide the operational detail and consistency to guide the implementation of the accountabilities under Schedule B. Eleven of these have been finalised and five are still being prepared. • Knowledge priorities to reduce uncertainty around future salinity risks under the BSM2030 strategy have been progressed, including: further development and trialling of a transfer function for use in groundwater models to compute irrigation accessions to groundwater recharge; commencing field investigations of floodplain evapotranspiration at two sites in South Australia; preparing an ARC linkage project proposal to investigate floodplain salinity processes to inform regional modelling and river salinity management activities; and continuing investigations at trial sites to understand the system responses to changed SIS operations. <p>Following are the key achievements in 2018–19 for long-term salinity planning and management:</p> <ul style="list-style-type: none"> • Under the Basin Plan, levels of salinity at four of the five reporting sites were assessed to have met the target values over the reporting period • The Basin salinity target was achieved for the tenth consecutive year • Eleven Basin salinity management procedures were finalised for application and drafts of the remaining five procedures were prepared • One salinity register entry review was completed and several other reviews were commenced and progressed • Knowledge priority projects to reduce uncertainty around future salinity risks were progressed

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		<ul style="list-style-type: none"> Implementation of the trial of responsive management of salt interception schemes continued <p>The salt interception schemes diverted approximately 474 thousand tonnes of salt away from the River Murray system and adjacent landscapes.</p>

Matter 16: Water Trading

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Restrictions on trade and their application (ss12.02 - 12.36)		
<p>M16.1 Ensure trades are consistent with the water trading rules.</p> <p><i>Applicable to BPIA Task 67.2</i></p>	<p>M16.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will consult with Basin States through the BPIC – Water Trade Rules Working Group in order to ensure regular targeted examination of Basin States’ water trading rules to assess whether those rules are consistent with the Plan.</p> <p>The MDBA may examine trading activity conducted within Basin States to ensure that it is consistent with the restrictions on trade and the right to trade free of certain restrictions.</p>	<p>The majority of consistency issues with the Basin Plan Water Trading Rules relate to individual Basin States, rather than then Basin as a whole. As such, the MDBA works with Basin States bi-laterally to identify and address inconsistencies. Regular updates about inconsistencies and measures to address those inconsistencies, are provided to Basin Plan Implementation Committee (BPIC).</p> <p>The MDBA has published the <i>Strategic Priorities - Basin Plan Water Trading Rules Policy</i>. This policy allows the MDBA to prioritise its regulatory and compliance activities. Priorities may be adjusted over time.</p>
Declarations on allowable restrictions on permitted use of exchange rates (ss12.18 & 12.22)		
<p>M16.2 Make a declaration on allowable restrictions on trade.</p> <p><i>Applicable to BPIA Task 68.1</i></p>	<p>M16.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>If a Basin State requests and the MDBA is satisfied that the restriction is necessary, the MDBA will make a written declaration that a restriction is allowable. The MDBA will publish its decision and the reasons for it on its website.</p>	<p>The MDBA did not receive any formal requests for a declaration of an allowable restriction from any Basin State in 2018-19.</p>
<p>M16.3 Make a declaration on permitted use of exchange rates.</p> <p><i>Applicable to BPIA Task 68.2</i></p>	<p>M16.3) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will make a written declaration permitting a specified exchange rate if a Basin State requests, and the MDBA is satisfied that it is for the purpose of addressing transmission losses, or to redress the impact of previous exchange rate trades. The MDBA will publish the declaration it its website.</p>	<p>The MDBA did not receive any formal requests for a declaration of an exchange rate from any Basin State in 2018-19.</p> <p>The MDBA has a framework in place to consider declaration requests for exchange rates.</p>
Information and reporting requirements (ss12.40 - 12.51)		
<p>M16.4 Publish information about water access rights and trading rules.</p>	<p>M16.4) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p>	<p>The MDBA has continued to publish information about approximately 70 highly traded water market products, State trading rules and the trading rules for large Irrigation Infrastructure Operators (IIOs).</p> <p>Links to State Trading Rules and IIO Trade Rules are regularly updated on advice from the</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p><i>Applicable to BPIA Task 69.1</i></p>	<p>The MDBA will determine the form in which information is to be provided, and will publish information provided to it (or nominate a central information point for publication).</p> <p>The MDBA will not require information to be given more than once per water accounting period, unless information is changed.</p>	<p>Basin States and IIOs.</p>
<p>M16.5 Make water announcements generally available.</p> <p><i>Applicable to BPIA Task 69.2</i></p>	<p>M16.5) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>Water announcements will be published in a way that makes them likely to be brought to the attention of interested members of the community.</p> <p>The MDBA will implement a process to ensure that a person, who is aware of a water announcement before it is generally made available, must not trade a water access right that is subject to the water announcement, or whose price or value would be materially affected by the announcement until that announcement is made.</p>	<p>MDBA ensures that water announcements were generally available by publishing media releases as well as putting the releases on the MDBA website.</p> <p>The MDBA continued to manage sensitive water market information consistent with its protocol (introduced 2014, reviewed in 2017-18). All MDBA workers must sign an annual statement they have read, understood, and will comply with the protocol.</p>
<p><i>The implementation of water trading rules</i></p>		
<p>M16.6 Compliance with the Basin Plan water trading rules.</p> <p><i>Applicable to Schedule 12 Matter 16, Indicator 16.1</i></p>	<p>M16.6) Authority to report on its obligations under the water trading rules not listed above.</p>	<p>As a key regulator of the rules, the MDBA has responsibility to address non-compliance and inconsistencies with the Basin Plan water trading rules.</p> <p>The MDBA takes a risk-based approach to compliance and regulation; and has developed an assessment framework to assess the consistency of Basin State(s) Trading Rules.</p> <p>In June 2019 the MDBA released its Water Trade Price Reporting Audit. The Audit identified several issues regarding the collection and presentation of price information across all Basin States. The MDBA has released its Management Response to the Price Audit, and will work with relevant Commonwealth and State Agencies to address the Audit's Findings.</p>

Other: Other Reporting Requirements

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Effectiveness Reports (s13.05)		
<p>ORR.1 Evaluate the effectiveness of the Basin Plan against the objectives and outcomes set out in Ch 5, 8 and 9.</p> <p><i>Applicable to BPIA Task 71.1</i></p>	<p>ORR.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>MDBA Annual Effectiveness Report developed annually in consultation with the BPIC – Monitoring and Evaluation Working Group.</p>	<p>The Basin Plan Annual Report 2017-18 was provided to the Commonwealth Minister for Water in December 2018. The MDBA will release an evaluation of the Basin Plan in 2020.</p>
Five-year advice of the Plan impacts (s13.05).		
<p>ORR.2 Advising on the impacts of the Basin Plan before the end of 2020, as required by section 49A of the Act [s13.059 (b)].</p> <p><i>Applicable to BPIA Task 72.1</i></p>	<p>ORR.2) The MDBA will prepare a report and recommendations for consideration of the Minister and Ministerial Council, drawing on the effectiveness reports.</p>	<p>This report is due in 2020. The report will draw on the evaluation of the Basin Plan, which is due in 2020.</p>
MDBA may conduct (and publish) audits to assess the extent of compliance with the Plan (ss13.10 & 13.20).		
<p>ORR.3 Conduct audit.</p> <p><i>Applicable to BPIA Task 74.1</i></p>	<p>ORR.3) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA may conduct, or appoint or establish a person or body to conduct, periodic audits to assess the extent of compliance with the Plan. Finalised audits will be published on the MDBA website.</p> <p>The MDBA will produce a report setting out the findings of the audit and any recommendations arising from the audit; and before the report is finalised, provide an opportunity to comment on the proposed findings and recommendations. The finalised audit report will be published on its website.</p>	<p>In response to the Murray-Darling Basin Water Compliance Review (2017), the MDBA continues to build its audit capability within its Office of Compliance. Alongside this, the MDBA also publishes its compliance priorities (https://www.mdba.gov.au/basin-plan-roll-out/compliance-enforcement/compliance-priorities) and annual audit program (https://www.mdba.gov.au/publications/mdba-reports/audit-assurance) to provide transparency on our approach each year.</p> <p>Audit Activities completed and published in 2018/19 include:</p> <ul style="list-style-type: none"> • The Review of the Northern Rivers Connectivity event • Part 1, Trade Price Audit conducted by MDBA • Part 2, Independent assurance report of individual trades • Review of the Condamine Alluvium Groundwater self-meter read process • Lower Murrumbidgee metering review (published September 2019)

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		All reviews and audit findings were discussed with auditees and opportunity to comment or provide a management response was provided prior to finalising and publishing. The MDBA have created an Audit Register to schedule follow-ups on findings and to see if recommendations have been effectively implemented, or that the stakeholder has accepted the risk of not taking action.
Assessments of trends in the condition and availability of Basin water resources (s13.11)		
<p>ORR.4 Undertake an assessment.</p> <p><i>Applicable to BPIA Task 75.1</i></p>	<p>ORR.4) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA may periodically undertake assessments of trends in the condition and availability of the Basin water resources and the social, cultural and economic contexts in which they are used, as revealed by monitoring information.</p> <p>The assessment will be undertaken in consultation with the BPIC – Monitoring and Evaluation Working Group.</p>	The MDBA conducts ongoing assessments of trends in the condition and availability of the Basin water resources, and social and economic condition in the Basin. The program includes water resource availability assessments, ecological monitoring, and social and economic research. This work will inform a State of the Basin condition report, which will be released in 2020.
Assessment and improvement of monitoring evaluation and reporting capabilities		
<p>ORR.5 Conduct an assessment of monitoring, evaluation and reporting capabilities.</p> <p><i>Applicable to s13.23, and BPIA Task 76.1</i></p>	<p>ORR.5) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will prepare a draft assessment in consultation with BPIC – Monitoring and Evaluation Working Group (by June 2017 – subject to Basin Plan amendments).</p> <p>The MDBA will finalise and publish the assessment, have regard to any recommendations, and exercise its best endeavours with Basin States, the Department and the CEWH, to give effect to those recommendations – (By November 2020 – subject to Basin Plan amendments).</p>	<p>The MDBA conducted an assessment of monitoring, evaluation, and reporting capabilities in 2018-19. The findings and recommendations of the assessment are being used to improve the monitoring and evaluation capabilities of the MDBA, Basin states and Commonwealth partners.</p> <p>The report is available on the MDBA's website: at https://www.mdba.gov.au/publications/independent-reports/monitoring-evaluation-reporting-capability-assessment</p>

Other: Water Resource Plan

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Identify all water resource plan areas (s3.03)		
<p>WRP.1 Identify and publish maps of the water resource plan areas.</p> <p><i>Applicable to BPIA Task 38.1</i></p>	<p>WRP.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will identify and hold relevant data sets for the publication on its website of a map that identifies each water resource plan area.</p>	<p>Up-to-date data sets and maps that identify the Water Resource Plan Areas for groundwater and surface water are available on the MDBA's website at: https://www.mdba.gov.au/publications/maps-spatial-data</p>
Assessment of water resource plans (ss10.01 - 10.55)		
<p>WRP.2 Assess water resource plans for accreditation.</p> <p><i>Applicable to BPIA Task 58.1</i></p>	<p>WRP.2) Progress with the development of water resource plans for accreditation is currently being reported by the MDBA. MDBA may add to/build on the most recent MDBA quarterly report on WRP development for this reporting requirement.</p> <p>For context, the BPIA noted the following requirements for the preparation of WRPs:</p> <p>The approach needed to address water resource plan requirements will vary according to local conditions, levels of development and statutory and other arrangements in the water resource plan area.</p> <p>Each Basin State will prepare water resource plans for the Plan's water resource plan areas.</p> <p>The MDBA and the Basin States agree that the Basin State will use the following types of instruments to inform the content of the Basin State's water resource plans:</p> <ul style="list-style-type: none"> • New South Wales: surface water and groundwater sharing plans; • Victoria: bulk water entitlements, environmental entitlements, groundwater management plans, sustainable water strategies and other instruments of the kind currently in place under the Victorian water planning and management framework. It is noted that this suite of instruments may be amended as a result of the outcomes of the current Victorian Water Law Review and further 	<p><u>Australian Capital Territory</u></p> <p>The ACT submitted its surface and groundwater WRPs to the MDBA for assessment and accreditation in April 2019. The MDBA is currently finalising its assessment of WRP material provided by the ACT.</p> <p><u>New South Wales</u></p> <p>As of 15 August 2019, NSW has exhibited all but three of its draft WRPs for public consultation, but has not submitted any plans to the MDBA for accreditation. In response to a request from NSW, the Commonwealth Minister responsible for Water granted an extension for submission of NSW WRPs to the 31 December 2019. The first NSW WRP is expected to be submitted for assessment in the coming weeks (as at 20 August 2019).</p> <p><u>Queensland</u></p> <p>Queensland submitted its remaining two WRPs for accreditation in April 2019. The MDBA made an accreditation recommendation to the Minister for the Condamine–Balonne and Qld Border Rivers–Moonie WRPs in June 2019.</p> <p><u>South Australia</u></p> <p>SA submitted the SA Murray Region WRP in November 2018 and it was accredited by the Minister on the 20 August 2019.</p> <p>The Commonwealth Minister responsible for Water has granted South Australia's request for an extension for submission of both the Eastern Mount Lofty Ranges and SA River Murray WRPs to 31 December 2019. SA submitted both these WRPs on 14 August. The MDBA is currently finalising its assessment.</p> <p><u>Victoria</u></p>

	<p>consideration will be given to the relevant instruments following the completion of that review;</p> <ul style="list-style-type: none"> • South Australia: water allocation plans; • Queensland: water resource plans and resource operations plans; and • Australian Capital Territory: water management plans. <p>The MDBA and each Basin State will separately agree on what further material would be required for each of the Basin State's water resource plans as part of individual Basin State work programs.</p> <p>The MDBA and Basin States will collectively settle a general approach to assessment and accreditation and to the key milestones and deliverables to be addressed in the Basin State work programs. Individual Basin State work programs for the preparation of water resource plans will then be agreed with the MDBA with a view to ensuring a progressive work flow through to 30 June 2019.</p> <p>If requested by a Basin State, the MDBA and the Basin State will agree on a water resource plan development program for a water resource plan area or areas. The program could include recommended standards for addressing accreditation requirements. The development of the agreed program may be informed by the risk assessment prepared for the area or areas.</p> <p>The Basin States and the MDBA agree that any risk assessments, advice or water resource plan development programs could be shared through the BPIC – Water Resource Planning Working Group to ensure continuous mutual improvement.</p> <p>Water resource plans must identify the objectives and outcomes based on indigenous values and uses and be prepared having regard to the views of relevant indigenous organisations with respect to cultural flows. The MDBA will consult with relevant indigenous organisations, including MLDRIN and NBAN, with respect to these matters during the assessment of water resource plans for accreditation.</p>	<p>Victoria submitted the final Wimmera–Mallee groundwater and surface water WRPs to the MDBA on the 3 July 2019. The Authority has now recommended the Wimmera–Mallee (surface water and groundwater) Water Resource Plans to the Minister for accreditation.</p> <p>Victoria submitted the Victorian Murray, Goulburn–Murray and Northern Victoria WRPs to the MDBA on the 30 April 2019. The MDBA is currently finalising its assessment of these WRPs.</p> <p>The MDBA notes that, while state instruments informed the development of Victoria's WRPs, these instruments were not incorporated into the plans as intended by the Water Act.</p> <p><u>Bilateral Agreements</u></p> <p>All Basin states and territory governments entered into bilateral agreements with the MDBA to ensure key elements of the water resource plans were given effect from 1 July 2019, where WRPs are not accredited by that date. The MDBA is of the view that all Basin governments can give effect to key Basin Plan commitments. The relevant evidence is set out in submitted WRPs and for NSW in a report provided and published on the MDBA website.</p>
<p>WRP.3 Convene water planners' forum.</p> <p><i>Applicable to BPIA Task 58.2</i></p>	<p>WRP.3) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will, commencing in 2014, convene an annual water planners' forum to which all parties will be invited to share experiences and new information relevant to the development of water resource plans for accreditation. Discussions at these forums may be used to inform updates of the <i>Handbook for Practitioners for Chapter 10, Water Resource Plan Requirements</i>.</p>	<p>With the development of water resource plans now largely complete, the MDBA is no longer running the annual water planners' forum. The MDBA held five water planners' forums since the Basin Plan came into effect and these were considered to be very effective in bringing people together during the development phase of WRPs. This group may be reconvened in the future to assist with the preparation of water resource plan amendments if required.</p>

Review of long-term diversion limit equivalence factors.

WRP.4 Review of long-term diversion limit equivalence factors.

Applicable to BPIA Task 61.1

WRP.4) Long-term diversion limit equivalence factors reflect the reliability of water access rights of the water resource plan area.

In consultation with Basin States, the MDBA will develop a work program and processes for the timing and revision of the long-term diversion limit equivalence factors through the BPIC – Water Resource Planning Working Group. The work program will outline the processes for stakeholder consultation.

The MDBA will consult with the BPIC – Water Resource Planning Working Group and BPIC, as appropriate. The MDBA will provide the proposed changes to the long-term diversion limit equivalence factors to the Ministerial Council for consideration.

As Basin States prepare and finalise their water resource plans, their long-term diversion limit equivalent (LTDLE) factors are also progressively being finalised.

The MDBA completed Independent Reviews of the NSW and Victorian approaches for LTDLE factors during 2018-19.

The updated NSW factors were published by NSW and the Independent Review was published by the MDBA in February 2019. When NSW submits its water resource plans (WRPs) for accreditation it is expected that there may need to be some minor adjustment to these updated LTDLE factors.

The MDBA undertook an Independent Review of Victorian LTDLE factors in the first half of 2019. Victoria then provided its WRPs for accreditation prior to 30 June 2019. The MDBA asked Victoria to revise the LTDLE factors to align with the WRPs. The Victorian Independent Review and factors are expected to be published in latter half of 2019.

South Australia and Queensland submitted their WRPs for accreditation prior to 30 June 2019. As the approach in these states has been to finalise the LTDLE factors after completing their plans, both the Independent Review and publication of the LTDLE factors will be completed in the latter half of 2019.

When efficiency measures are nominated for the ACT, LTDLE factors will be considered at that time.

Other: Sustainable Diversion Limit (SDL) Implementation, SDL Adjustment & Constraints Management

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Identification of surface water sustainable diversion limit resource units (s6.02)		
<p>SDL.1 Identify and publish the surface water sustainable diversion limit resource unit maps. Hold relevant data sets.</p> <p><i>Applicable to BPIA Task 41.1</i></p>	<p>SDL.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will identify and hold relevant data sets and publish on its website maps that identify each surface water Sustainable Diversion Limit resource unit.</p> <p>The MDBA will consult with Basin Plan Implementation Committee and the Basin Plan Implementation Committee – Water Resource Plan Working Group to update and maintain surface water sustainable diversion limit resource unit maps, as required.</p>	<p>Up-to-date data sets and maps that identify each surface water sustainable diversion limit resource unit are available on the MDBA's website at: https://www.mdba.gov.au/publications/maps-spatial-data</p>
Identification of groundwater sustainable diversion limit resource units (s6.03)		
<p>SDL.2 Identify & publish groundwater sustainable diversion limit resource unit maps.</p> <p><i>Applicable to BPIA Task 42.1</i></p>	<p>SDL.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will identify and hold relevant data sets and publish on its website maps that identify each groundwater sustainable diversion limit resource unit.</p> <p>The MDBA will consult with BPIC and the BPIC – Water Resource Planning Working Group as appropriate.</p> <p>The MDBA will update a groundwater SDL resource unit map where, following consultation, a change is identified as necessary. The maps are available on the MDBA website. The MDBA will maintain a groundwater SDL resource unit map on its website.</p>	<p>Up-to-date data sets and maps that identify each groundwater sustainable diversion limit resource unit are available on the MDBA's website at: https://www.mdba.gov.au/publications/maps-spatial-data</p>
Constraints Management Strategy (s7.08)		
<p>SDL.3 Provide annual reports to Ministerial Council on progress with implementing Strategy.</p> <p><i>Applicable to BPIA Task 45.7</i></p>	<p>SDL.3) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will assess and report on progress against recommendations in the Constraints Management Strategy, in consultation with Basin States.</p>	<p>Constraints as part of the SDL Adjustment Mechanism (SDLAM)</p> <p>The MDBA determined the sustainable diversion limit adjustment volume in September 2017, based on the package of projects notified by the Basin Officials Committee to the MDBA. In January 2018, this adjustment was proposed and adopted as an amendment to the Basin Plan by the Australian Government Minister responsible for water.</p> <p>The Basin Plan SDLAM amendment increased SDLs by 605 GL in the southern-connected Basin, based on outcomes from a package of 36 supply and constraints</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		<p>measures notified to the MDBA by the Basin Officials Committee. This included five constraint projects submitted as supply measures (two further constraint measures, Goulburn and Gwydir, were not notified as supply projects). The Goulburn in Victoria was submitted separately as a constraint project, and the Gwydir project will be further developed by the NSW state government as part of the Northern Basin Review's toolkit measures. The Gwydir was not considered as part of the SDLAM.</p> <p>Proponent states are responsible for driving and delivering their individual constraints measure projects at a local-level, including consulting with communities, detailed project design and implementation. Basin state governments have agreed that no changes to flows will occur until third party impacts have been resolved in consultation with affected communities.</p> <p>The MDBA provided technical analysis of the projects to support Basin state governments with project feasibility studies and business cases. This is in line with the phased process agreed to by all Basin governments.</p> <p>Information about the adjustment process and the determination can be found at https://www.mdba.gov.au/basin-plan-roll-out/sustainable-diversion-limits/sdlam</p> <p>The determination reports and assessment of projects can be found at https://www.mdba.gov.au/publications/mdba-reports/sustainable-diversion-limit-adjustment-mechanism-assessment-draft</p> <p>The MDBA provides progress updates on the implementation of SDLAM projects as well as an annual progress report that includes information about the progress of constraints measure projects in 2018-19- https://www.mdba.gov.au/basin-plan-roll-out/sustainable-diversion-limits/sdl-adjustment-proposals-state-projects</p> <p>AND https://www.mdba.gov.au/publications/mdba-reports/adjusting-sustainable-diversion-limits-annual-progress-report</p> <p>Constraints Measures Program</p> <p>To assist in progressing delivery of the Constraints Measures Program (CMP), a Constraints Measures Program Coordinating Work Plan (the work plan) was developed by the Constraints Measures Working Group (CMWG) in 2018-19.</p> <p>The development of a coordinated approach between Basin states to constraint projects is necessary to resolve strategic issues affecting program delivery, and avoid inequity in</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		<p>measures offered between states. This could include, for example, rural levee management regulation and ownership arrangements that currently differ across jurisdictions.</p> <p>The work plan provides governments with a means to guide a phased implementation approach for the delivery of integrated constraints projects across the entire southern connected system between now and 2024. It establishes principles and processes to facilitate community involvement in constraint project development and planning. The work plan indicates a considerable amount of work in the first half of 2019 to identify strategic whole-of-system risks/issues and prepare a path forward for the program.</p> <p>In December 2018 Ministers endorsed the work plan and agreed to progress the work plan. The CMWG, through the MDBA provided the first progress report on the deliverables of the Work Plan to Minco at its August 2019 meeting. Ministers noted the progress and:</p> <ul style="list-style-type: none"> • underlined the need to ensure that coordinated implementation provided the environmental and river channel capacity outcomes that well-designed constraints projects can deliver for landholders and the environment • noted that successful implementation of the constraints program will require close engagement with landholders and local communities, as outlined in the comprehensive risk management strategy for the coordinated implementation of the constraints program. <p>Victoria and New South Wales will undertake independent modelling of flow rates under constraints projects, and report back to Ministerial Council in December 2019.</p>
<p>SDL.4 Amend the Constraints Management Strategy as appropriate.</p> <p><i>Applicable to BPIA Task 45.8</i></p>	<p>SDL.4) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will consider new information and progress in implementing the Constraints Management Strategy and update, as required, in consultation with all parties and the community.</p>	<p>To ensure consideration of new information, in early 2019, the Constraints Measures Working Group (CMWG) prepared the Constraints Measures Program Risk Management Strategy, which focuses on issues that:</p> <ul style="list-style-type: none"> • impact the program at a strategic level • cross jurisdictional boundaries, and • affect the delivery of program outcomes. <p>The key risks fall into three main areas: stakeholder support, data and information and coordination and management. In 2018-19, the CWMG has been identifying and implementing treatments for the identified risks, these include the establishment of the Engagement and Communication and Policy sub-committees. The CMP Coordinating</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		Work Plan is expected to be refined in early 2020.
Development of methods for calculating supply and efficiency contributions (s7.14-7.17, 7.20, Schedule 6)		
<p>SDL.5 Advise Basin States on the feasibility of supply measure proposals.</p> <p><i>Applicable to BPIA Task 46.2</i></p>	<p>SDL.5) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will assist SDLAAC to assess the feasibility of supply measure proposals, including through the provision of technical advice and modelling, once the benchmark model and the ecological elements scoring method are complete.</p>	<p>Assisting SDLAAC, the MDBA provided technical analysis of projects to support Basin governments in their assessment of project feasibility studies and business cases. Moving forward the MDBA will also provide technical advice and assistance to jurisdictions on an ongoing basis, based on its available expertise in river operations, hydrological modelling, and environmental water management. The MDBA also has a key role in monitoring the integrity of SDLs and the operation of the adjustment mechanism by 2024. It will make a decision on whether it considers that the package of SDLAM projects, as delivered, provides the environmental outcome determined in 2017. If at any point the MDBA considers that this will not be the case, it will undertake a reconciliation process to evaluate the difference and adjust SDLs to reflect actual environmental outcomes delivered.</p> <p>In 2018-19, MDBA started publically reporting on how all jurisdictions are progressing in the implementation of the Sustainable Diversion Limit Adjustment Mechanism (SDLAM) program— https://www.mdba.gov.au/publications/mdba-reports/adjusting-sustainable-diversion-limits-annual-progress-report</p> <p>To date, the MDBA notes progress in some areas, but there is also still a substantial amount of work to be done, with some risks and challenges to the successful delivery of the SDLAM program. Basin state governments have committed to the delivery of all adjustment projects, however there are a number of key issues to address to ensure implementation remains on track. This includes appropriate governance and funding arrangements to allow program roll out, and ensuring a high level of engagement and transparency on projects at the local level and more broadly. Communities need to be strongly involved and informed in project design and delivery early in the process.</p> <p>The Adjustment Implementation Committee (AIC) has assumed responsibility for outstanding SDLAAC matters including, but not limited to:</p> <ul style="list-style-type: none"> • Phases assessment of supply and constraints measures • Post-Phase II issues register • Notification amendments. <p>The AIC is comprised of members from NSW, Victoria, South Australia, the Commonwealth and the MBDA although terms of reference are still being finalised.</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>SDL.6 Develop proposed approach to incorporating efficiency measures into the SDL adjustment mechanism.</p> <p><i>Applicable to BPIA Task 46.4</i></p>	<p>SDL.6) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will develop an approach on how the 2016 SDL adjustment could incorporate the progressive recovery of water from efficiency measures, in consultation with Basin States.</p>	<p>Ongoing. For the full 605 GL adjustment to be realised, 62 GL of efficiency measures are required by 30 June 2019 to ensure the Basin Plan’s five per cent adjustment legal limit is not exceeded. Projects are expected to be put forward by Basin state and territory governments to meet the 62 GL required. Additional efficiency projects can continue to put notified to the MDBA until 31 December 2023.</p> <p>As a result of a shortfall in efficiency measures at 30 June 2019, water recovery may be less than that required to meet SDL in some catchments.</p> <ul style="list-style-type: none"> •The Australian Government has tasked the newly launched (July 2018) Murray–Darling Basin Water Infrastructure Program (MDBWIP) to focus on achieving the 62 GL and Basin state governments have proposed potential projects to achieve this goal. The MDBWIP has not recovered any water to date. • In December 2018, ministers agreed a series of additional socio-economic criteria, to be applied to all efficiency projects proposed under the program, with a few exceptions. • To ensure that the aims of the program are achieved, careful consideration must be given to managing the application of the additional criteria to ensure that it does not introduce impediments to finding suitable projects by June 2019. <p>As a result of the Government agreeing to the Basin Commitments Package, funding for supply measures are linked to the delivery of efficiency measures. Under this approach, state access to supply measure funding would be conditional on the Commonwealth being able to roll-out any efficiency measures programs. These arrangements would be set out in the performance milestones under funding agreements with the States.</p> <p>The Authority will consider whether reconciling the package of SDLAM projects by 30 June 2024 against the equivalent environmental outcomes determined in 2017 is required. The project assumptions within the MDBA’s modelling of the 2017 determination make up a base-line for the projects. Any changes after further design, community consultation or other influences will be reported at regular intervals and an assessment of the impact of these factors will be undertaken and accounted for through the MDBA’s sustainable diversion limit reconciliation process in 2024.</p> <p>The MDBA is currently developing a reconciliation statement for public release. As efficiency measures are delivered, the MDBA will keep a register of the entitlements recovered.</p>
<p>Notification and registration of measures (ss7.12, 7.13)</p>		
<p>SDL.7 Maintain a register of notified measures and publish on</p>	<p>SDL.7) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p>	<p>Ongoing. The notification register is available on the MDBA website. The register is provided in the form of two tables:</p> <ul style="list-style-type: none"> • Table A lists the relevant details of each notified measure

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
<p>website.</p> <p><i>Applicable to BPIA Task 47.1</i></p>	<p>The MDBA will establish the register as soon as practicable after it receives its first notification. The MDBA will update the register, as soon as practicable, after receiving additional notifications or amendments to existing notifications. A process for receiving notifications and updating the register will be developed by the MDBA in consultation with basin states.</p>	<ul style="list-style-type: none"> Table B lists the efficiency entitlements and likely SDL adjustment for each of the Basin's surface water SDL resource units. <p>From 2019, changes to notified measure details listed in Table A will be endorsed by the Adjustment Implementation Committee (assuming the role of the Sustainable Diversion Limit Adjustment Assessment Committee) and then once agreed by the Basin Officials Committee, are provided to MDBA. MDBA then subsequently updates the table.</p>
<p><i>Determining and proposing initial adjustment amounts (ss7.10, 7.15-7.20, 7.23)</i></p>		
<p>SDL.8 Determine the amounts of proposed SDL adjustments resulting from any measures notified by 30 June 2016.</p> <p><i>Applicable to BPIA Task 48.1</i></p>	<p>SDL.8) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>Using the methods developed in consultation with Basin States, the CEWH, the Department and relevant members of the science community, the MDBA will determine contributions from notified supply measures (taking into consideration the impact of unimplemented policy measures) and efficiency measures and propose adjustments amounts.</p> <p>Before proposing an adjustment, the MDBA must seek and consider advice from BOC and submissions from members of the community.</p>	<p>Complete. The MDBA determined an adjustment to the Sustainable Diversion Limit based on the package of measures notified by Basin state governments to the MDBA. Using the science based assessment framework - designed in collaboration with Basin governments, and including the ecological equivalence method developed by the CSIRO, the MDBA assessed notified supply measures and recommend an adjustment to the SDL. This draft determination was open for public consultation in October 2017. BOC also reviewed the draft determination and provided advice to the MDBA. In January 2018, this adjustment was proposed and adopted as an amendment to the Basin Plan by the Australian Government Minister responsible for water.</p>
<p>SDL.9 Propose SDL adjustments.</p> <p><i>Applicable to BPIA Task 48.3</i></p>	<p>SDL.10) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will prepare amendments to the Plan, for adoption by the Minister (under section 23B of the Act).</p> <p>The MDBA will consult with Basin States through BOC, or other committees as appropriate, on the implications of a proposal on any declared Ramsar wetland. The MDBA will advise the Minister on the implications of an SDL adjustment amount proposal for any declared Ramsar wetland. The advice will be provided as part of the package of information presented to the Minister when proposing an adjustment amount.</p>	<p>Complete. MDBA considered feedback received on the draft determination and prepared an amendment to the Basin Plan for consideration by the Commonwealth Minister responsible for Water. In preparing the amendment, the MDBA provided advice to BOC and the Authority for consideration on the implication of the SDL adjustment proposal for any declared Ramsar wetlands.</p> <p>In December 2017, the determination was proposed and the adjustment adopted as an amendment to the Basin Plan by the Commonwealth Minister responsible for Water in January 2019.</p>

Other: Reviews of the Basin Plan

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Reviews of the Basin Plan (s6.06)		
<p>RBP.1 Conduct research and investigations to inform reviews of the Basin Plan. Publish the results.</p> <p><i>Applicable to BPIA Task 43.1</i></p>	<p>RBP.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will conduct research and investigations for informing any reviews of the Plan and publish on its website any reports produced as a result of this research or investigation.</p> <p>The MDBA will develop, consult through BPIC and implement a strategy to provide new knowledge to future Basin Plan reviews and update the relevant aspects of the Plan.</p> <p>The MDBA will publish its final report on research or investigations conducted to inform any reviews of the Plan on its website.</p>	<p>The MDBA conducted several review activities in 2018-19, as well as supporting a number of reviews. These include:</p> <ul style="list-style-type: none"> • A review of the Basin-wide Environmental Watering Strategy • Reviews of fish deaths in the lower Darling River • A review of the effect of irrigation efficiency projects and groundwater sustainable diversion limit on river flows • A review of the River Murray system Objectives and Outcomes document • Strategic review of the River Murray Health program <p>The MDBA initiated the following reviews in 2018-19. These reviews will be completed in 2020.</p> <ul style="list-style-type: none"> • Reviews of the Environmental Watering Plan and the Water Quality and Salinity Targets in the Basin Plan
<p>RBP.2 Undertake a review of the work underpinning the SDLs in the Northern Basin, including the basis for the long-term average sustainable diversion limits for surface water and groundwater SDL resource units.</p> <p><i>Applicable to BPIA Task 43.3</i></p>	<p>RBP.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will undertake the review of the work underpinning SDLs for the Northern Basin, in collaboration with New South Wales and Queensland, who will participate in the review and advise on associated studies, processes and final recommendations.</p> <p>The MDBA has established a Northern Basin Advisory Committee (NBAC) to provide independent strategic advice to the MDBA on how an adaptive Basin Plan can be implemented in the Northern Basin.</p> <p>The MDBA, New South Wales and Queensland have endorsed the formation of the Northern Basin Intergovernmental Working Group, a technical reference panel of Queensland, New South Wales and Commonwealth officials (MDBA, the CEWH and the Department), to provide advice on developing and implementing the Northern Basin work program.</p> <p>The work program for 2012-13 was developed in consultation with NBAC and the Northern Basin Intergovernmental Working Group, and both groups are working with the MDBA to develop and implement the remaining three years of the Northern Basin scientific and socio-economic</p>	<p>The MDBA, in close consultation with the New South Wales and Queensland governments, finalised a review of Basin Plan settings in the northern Basin in 2017-18.</p>

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
	<p>work program through 2015-16.</p> <p>The MDBA commits to provide funding of \$1 million per year over the three financial years (2013-14 to 2015-16) to be allocated by the MDBA for projects under the Northern Basin work program, noting that the scope and funding amounts for particular projects will be determined by the MDBA in light of advice from established consultative arrangements with the New South Wales and Queensland governments and NBAC.</p> <p>The Commonwealth has committed to provide \$822,000 in Commonwealth funding for the <i>Floodplain vegetation watering requirements proposal</i>, subject to the outcomes of the scoping study for Queensland now underway. The project would be delivered over three financial years, from 2013-14 to 2014-15, through the Murray–Darling Freshwater Research Centre, who will work with research providers in the Northern Basin.</p>	

Other: Assessing Inflows

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Establish and maintain assets and functions database (s8.48)		
<p>AF.1 Establish and maintain assets and functions database.</p> <p><i>Applicable to BPIA Task 52.1</i></p>	<p>AF.1) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>The MDBA will prepare a draft strategy for developing and maintaining the environmental assets and functions database.</p> <p>The MDBA will consult on the strategy through the BPIC – Environmental Watering Working Group.</p> <p>The MDBA will implement the strategy as agreed.</p> <p>The MDBA may publish this database on its website.</p>	<p>MDBA continues to develop the Environmental Assets and Functions Information System consistent with our enterprise data initiative and data pipeline which provides the necessary tools and technology. The development is aligned to the blueprint that was developed by Think Place in 2014-15. There was consultation with all states and water holders at the time.</p> <p>We have completed the foundational database that contains assets and functions and their objectives, targets and watering requirements. This is being populated and revised as state long term watering plans (LTWPs) are completed. The database cannot be fully populated until the last LTWP is completed (expected late 2019) as these are where assets and functions are defined. Consultation with the Environmental Watering Working Group on a hierarchical structured master list of assets was undertaken in late 2018. This master list allows us to join the asset database to our watering history database and monitoring databases as, together, these are essential components that must be joined to meet the information system's high priority user requirements.</p>
Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Process for assessing inflows (s11.06)		
<p>AF.2 Monitor and review inflow volumes within the River Murray System.</p> <p><i>Applicable to BPIA Task 62.1</i></p>	<p>AF.2) Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:</p> <p>Within the River Murray System, the MDBA¹ must monitor and review inflow volumes taking into account the best possible inflow information, tributary inflows, daily, monthly and seasonal weather conditions and trends in climate and inflow patterns.</p>	<p>The MDBA is required, under the Objectives and outcomes for river operations in the River Murray System, to prepare water resource assessments monthly or at more frequent intervals approved by the Committee. Since the Millennium Drought, MDBA has been providing these assessments fortnightly for the majority of the water accounting periods to support the states in making their fortnightly allocation announcements. No changes to the inflow statistics were warranted as inflows were not near minimums.</p>

¹ In relation to River Operation including tasks 62-65, the Independent River Operations Review Group (IRORG) has reviewed the Authority's compliance with the Act and the Basin Plan in relation to river operations. IRORG has reported "The Authority was able to demonstrate to IRORG that it had met its obligations under the Act and Basin Plan in relation to these operational functions."

Attachment A: Theme B - Basin Environmental Watering Priorities (BAEWP) for reference in reporting why watering not undertaken in accordance, under BPs8.44

(See Attachment A in separate document).