Australian Government

MURRAY–DARLING BASIN AUTHORITY

Office of the Chief Executive

2016-17 Statement of Assurance – Murray-Darling Basin Authority

In order to maximise transparency and provide assurance to other parties and the community that the obligations under the *Basin Plan 2012* and the Basin Plan Implementation Agreement are being implemented appropriately, the Murray-Darling Basin Authority has completed a self-assessment of compliance against its obligations under the Basin Plan and Basin Plan Implementation Agreement for the 2016-17 water accounting period.

I certify that to the best of my knowledge, for the 2016-17 water accounting period, the information provided in the attached assessment accurately reflects the extent to which the MDBA has complied with its obligations under *Basin Plan 2012* and fulfilled its commitments under the Basin Plan Implementation Agreement.

Where there are instances of partial or non-compliance, I have identified the measures that the Murray-Darling Basin Authority is taking to address each of these matters.

Yours sincerely

Phillip Glyde

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GPO Box 1801 Canberra ACT 2601 Telephone 02 6279 0470 Facsimile 02 6279 0133
Phillip.Glyde@mdba.gov.au
www.mdba.gov.au

Information collection template for water year 2016-17 (MDBA)

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The Murray-Darling Basin Authority (MDBA) 2016–17 Annual Report to satisfy reporting obligations for:

- Basin Plan Schedule 12 responses.
- Basin Plan Implementation Agreement (BPIA) self-assessment of compliance with implementation tasks.

Reporting context

This template provides for one Commonwealth information collection point, which can be used multiple times to meet the MDBA's reporting obligations in relation to the Murray-Darling Basin Plan.

Our aim is to reduce duplication, improve transparency and increase efficiency of reporting. The template has been tailored to address information requirements for the 2016-17 reporting year and will be updated for each subsequent reporting period.

The information collection template is designed to satisfy reporting obligations for Basin Plan Schedule 12 and the Basin Plan Implementation Agreement compliance requirements.

Please note that the drafting text, in the response column, highlighted yellow should be removed before the completed template is submitted.

A. 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)		
A1 Implementation and management of the risk strategies under s4.03 (3) of the Basin Plan. *Applicable to Schedule 12 Matter 4, Indicator 4.1 and BPIA Task 39.1*	How regard was had to the risk strategies.	The MDBA continues to progress the implementation of the Basin Plan in accordance with s4.03(3) through the following activities: • Implementation of the Environmental Watering Plan and associated activities (see Reporting Matter C) • Development of the water quality and salinity management plan (see Reporting Matter E) • Operation of the water trading rules (see Reporting Matter F) • Assisting Basin States with Water Resource Plan (WRP) development, and performing the assessment of the first proposed WRP submitted for accreditation (Warrego–Paroo–Nebine WRP) (see Reporting Matter H). In alignment with the other strategies listed under s4.03, in 2016/17 the MDBA has conducted the following activities: • Progressing amendments to the Basin Plan resulting from groundwater and Northern Basin reviews, and the review of the Water Act • Promoting a risk-based approach to water resource planning through the development of Guidelines for meeting Basin Plan requirements for WRP risk assessment in consultation with Basin states; finalising a risk assessment process to identify key risks to the timely finalisation of WRPs and commencing regular reporting upon this, convened a workshop of representatives from MLDRIN, NBAN and WRPWG to share information about Part 14 requirements of the Basin Plan and consideration of Aboriginal values in the risk assessment and planning process, and at the 4th Annual Water Planners' Forum, held on 16 – 17 May 2017, included an agenda item on the role and use of risk management in WRP development (see Reporting Matter H). • Working with Basin States and environmental water holders on the Basin multiyear environmental watering priorities, to optimise flow outcomes for a range of water users (see Reporting Matters C) • Reporting annually on the implementation of the Basin Plan and progressing work toward the 2017 Interim Evaluation • Continued to establish its regulatory role through the development of a

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		Compliance Program • Improving knowledge of Basin water resources through a range of projects, including: ○ Work associated with the 2017 Interim Evaluation that is improving knowledge of watering requirements in the MDB for social, spiritual and cultural uses by indigenous people and is improving knowledge requirements in the MDB for the water required to deliver social and economic benefits to Basin communities. ○ Progressing amendments to SDLs as a result of the reviews of two NSW and one Victorian groundwater area and the Northern Basin Review outcomes (see Reporting Matter J)
Strategies to manage or address identified risks (s4.03)		
A2 Identify research priorities to address risks to Basin water resources. *Applicable to BPIA Task 39.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	The MDBA's Research and Knowledge Strategy (2014) aligns with the National Water Knowledge and Research Platform (2012) to strengthen underlying knowledge and drive research to inform the implementation of the Basin Plan. The strategy identifies strategic advice and partnerships, visiting research fellows and academic publishing as means to meeting research priorities. A relevant example of how the strategy has implemented the Basin Plan Implementation Agreement is the MDBA's strategic partnership with CSIRO, which has enabled the development of floodplain hydrological modelling capabilities particularly in the Northern Basin. The Strategy will be reviewed next financial year (2017-18) to ensure that it aligns with MDBA's needs and identifies research priorities to address risks to Basin water resources.
Guidelines to assist in implementing risk strategies (s4.04)		
A3 Develop guidelines that provide further advice on actions that may be taken to implement the risk strategies listed. *Applicable to BPIA Task 40.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** If required, the MDBA will develop guidelines in consultation with BPIC and the BPIC – Water Resource Plan Working Group.	Guidelines for meeting Basin Plan requirements for water resource plan risk assessment have been developed in consultation with Basin states. These have been approved and are pending publishing. Note these guidelines are prepared to support meeting Chapter 10 requirements and are not guidelines under s4.04. 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.

B. Local Knowledge and Stakeholder Engagement

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
The extent to which local knowledge and solutions inform the implementation of the Basin Plan.		
B1 The outcome of engagement on the implementation of the Basin Plan. *Applicable to Schedule 12 Matter 6, Indicator 6.1*	Where possible include specific examples: • How local knowledge and solutions were used by the reporter • How involving communities made a difference to Basin Plan implementation • How decisions changed as a result of community involvement Local knowledge might include knowledge drawn from Traditional Owners and other Aboriginal people and groups. When reporting on Aboriginal participation and influence, processes of involvement may be as important as outcomes. In 2015/16 reporting, we would expect use of local knowledge to feature in development of Water Resource Plans. Examples or case studies are not mandatory, but may be a useful way to describe how local knowledge and solutions inform implementation of the Basin Plan.	**Engagement** Local knowledge and solutions gained through community engagement in the Basin have influenced how the MDBA implements the Basin Plan and our evaluation of Basin Plan implementation and provides information. Improving community awareness and understanding of the Basin Plan is a core component of the MDBA's work, and is most effectively done through two-way communication and customised engagement to suit different regional preferences and key issues. Based on feedback from communities, environment groups, farmers, local government and recreational water users the MDBA has decided to establish a presence in some Basin communities by employing locally-based Regional Engagement Officers. This will build a stronger understanding of the local relevance of the Basin Plan and enable the MDBA to be responsive to local information and needs. The MDBA has engaged seven Regional Engagement Officers hosted by organisations including Regional Development Australia, Natural Resource Management/Catchment Management Authority organisations and local councils across the Basin. Our host partners have a rich understanding of water issues in their region, which helps us to build the local relevance of the Basin Plan. The host organisations along with their respective REOs are based in: Wodonga and Shepparton in Victoria, Wentworth and Leeton in NSW, Murray Bridge in South Australia and Dirranbandi/St George in Queensland. Our REOs all have different backgrounds—some are floodplain graziers, irrigators, catchment managers and business people—but they all share a common passion for their regions. The response to the REOs, both within regional communities and the MDBA, has been very positive, and we have committed to a permanent REO network based on the success of the pilot. The REOs are improving and enhancing the connection between the MDBA with their region, by facilitating a two-way exchange of information. Concerns and feedback from the regions are now provided directly to the MDBA policy staff to better inform their work. **Northern Basin Review** Throughout the MDBA's Northern Basin Review process, the MDBA has sought to

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		engage a broad range of stakeholders to incorporate their feedback into the decision making process. The MDBA held over 50 meetings across the Northern Basin. These meetings included community drop-in sessions, general information meetings and targeted roundtable workshops. At the workshops the MDBA presented the results of work on achieving environmental outcomes, social and economic work and the Aboriginal survey work. Throughout the first two consultation phases the community provided input into the decision making process both directly at the meetings and in response to the written meeting summaries. This feedback contributed to the Triple Bottom line decision-making framework, stakeholder consultation report, and was considered as part of finalising the Northern Basin Review. During the formal consultation we consulted extensively. Public meetings were held in Warren, Walgett, Wee Waa, Brewarrina, Bourke, Wilcannia, Gunnedah, Moree, Dirranbandi, St George, Goondiwindi, Toowoomba and Wilcannia. We also ran information sessions in the southern Basin towns of Echuca-Moama, Shepparton, Griffith and Loxton. Briefing sessions were held for industry, government and environmental groups in Sydney, Narrabri, Cobar and Dubbo. The submission period occurred over 14 weeks and concluded in February 2017, with 2,144 submissions received from a wide range of stakeholders including individuals and town residents, local business and industry, peak bodies, Traditional Owners, local and state government, tourism operators and a wide range of groups representing the environment, irrigation and graziers. Stakeholder concerns on the recommended change to the SDL varied from catchment to catchment and articulated the diverse range of stakeholder groups' views and interests throughout the Basin. All submissions received were published on our website. We published a separate report on our website that summarised the themes raised throughout the consultation process as well as our response to the submissions. **Basin-wide engagement** The MDBA conducted and participated in over 400 meetings including hundreds of community meetings, in 2016-17. Meeting participation including roundtables, public meetings, presentations and briefings and events such as field days and shows. Through these meetings we engaged a broad range of stakeholders including Aboriginal people, NRM and landholders, and industry and agricultural groups such as dairy, cotton, table

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		grapes, wines grapes citrus, horticulture and rice. The information gained from these activities has informed the implementation of the Basin Plan by giving the MDBA a broader and more complete understanding of issues affecting communities. **Aboriginal Partnerships** MDBA attended Northern Basin Aboriginal Nations (NBAN) and Murray Lower Darling Rivers Indigenous Nations (MLDRIN) Board meetings (five each) and full gatherings (four each including a joint full gathering) to discuss Basin Plan implementation and receive strategic input from these two peak Traditional Owner-based organisations. In particular, NBAN and MLDRIN worked with MDBA to develop a culturally appropriate and sensitive WRP animation. MLDRIN and NBAN delegates also worked with MDBA's Environmental Watering team on ways to integrate Aboriginal perspectives into long-term environmental planning. MLDRIN and NBAN delegates participated in an MDBA organised workshops with state governments and MDBA to discuss implementation of BP Chapter 10, Part 14. These are regular workshops held every 6-12 months. NBAN and MLDRIN delegates worked with MDBA and provided advice in relation to the Basin Plan evaluation and the Aboriginal Weather Watchers project. NBAN delegates with MDBA organised workshops and facilitated the development of Aboriginal community submissions to the Northern Basin Review. MLDRIN delegates coordinated the implementation of three Aboriginal Waterways Assessment (AWA) projects in Victoria. The AWA is a tool for Traditional Owners to potentially use in relation to Water Resource Planning or water management and planning more broadly. MLDRIN, with support from the MDBA, coordinated consultation with Traditional Owners from a number of member Nations affected by proposed changes to SDLs in three groundwater resource areas. **TLM Engagement** Jointly held environmental watering (The Living Murray) for 2016/17 was informed by proposals for priority environmental watering actions. Proposals were developed with the support of the icon site managers, and a range of other stakeholders including; local communities, government agencies, land and waterway managers, scientists and

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		traditional owners. The Living Murray Indigenous Partnerships Program (IPP) is an initiative established by Joint Governments to identify opportunities for Indigenous contribution in the planning and management of icon sites and environmental watering activities. The states of Victoria, New South Wales and South Australia deliver IPP in different ways in order to suit icon site and local community needs. Most states contract icon site-based Indigenous Facilitators or conduct discrete projects. Example: 2016-17 activities from across the sites include: • Indigenous community consultation on site-based environmental water planning (annual site plans and long-term environmental water management plans developed under the Basin Plan), cultural heritage management, pest management and ecological monitoring. • Facilitating Indigenous people to go out onto country to reconnect with cultural practices and traditions • Provision of job training in ecological monitoring (leaf litter, turtles, scar tree health, fish). • Improving capacity of indigenous communities to inform water management decisions by identifying and sharing cultural knowledge and values. • Direct assistance with ecological monitoring by scientists undertaking environmental monitoring. Attendance and presentations at community events and other fora.
B2 Processes used to identify stakeholders and other relevant groups and individuals from local communities and peak bodies. *Applicable to Schedule 12 Matter 6, Indicator 6.2*	Where possible include process used to identify stakeholders and other relevant groups/individuals.	Northern Basin Aboriginal Nations (NBAN) and Murray Lower Darling Rivers Indigenous Nations (MLDRIN) provide MDBA with culturally authoritative advice including identification of Traditional Owners and Aboriginal people. This occurs in line with MDBA's principles to engage Aboriginal people in the Murray-Darling Basin. The MDBA has undertaken extensive stakeholder mapping and continues to update its stakeholder lists to support its community engagement. Working with our community advisory committees, Basin Community Committee and the Northern Basin Advisory Committee we seek regular advice from community representatives to identify who and how we meet with stakeholders in the Basin. In 2016-17, roundtable meetings with industry, local government and environmental NGO peak bodies have provided opportunities to confirm our processes for identifying stakeholders in key regional areas are thorough and efficient. We increasingly seek to deepen our stakeholder relationship in every region of the Murray Darling Basin. The MDBA has also launched its internal

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		Customer Relationship Management database to improve coordination within the MDBA and regularly reports on its activities with state and Commonwealth agencies with the Basin Plan Implementation Committee.
B3 How stakeholders and other relevant groups and individuals were engaged. *Applicable to Schedule 12 Matter 6, Indicator 6.3*	Where possible include: • Range of audiences engaged • Range of opportunities for example types of engagement Relate these to the Basin Plan obligations to have regard to local views (Chapter 8 and 10)	The range of engagements include meetings, phone calls, written correspondence. In 2016-17 the MDBA conducted and participated in over 400 meetings including hundreds of community meetings. Meeting participation including roundtables, public meetings, presentations and briefings and events such as field days and shows. Through these meetings we engaged a broad range of stakeholders including Aboriginal people, NRM and landholders, and industry and agricultural groups such as dairy, cotton, table grapes, wines grapes citrus, horticulture and rice. The MDBA has various channels to enable individuals to directly engage with the MDBA including a hotline, social media channels and email. We responded to over 500 emails and phone calls received through engagement@mdba.gov.au.

C. 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)		
C3 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 *Applicable to Schedule 12 Matter 10, Indicator 10.1 and BPIA Task 51.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:**	
	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.	The MDBA consulted with Basin States and the Commonwealth Environmental Water Holder (CEWH) to review the framework for developing the *Basin annual environmental watering priorities* (Priorities) for 2016-17 through a range of processes and forums. For example, the MDBA sought feedback on the Priorities for the previous water year from the CEWH, the Basin Plan Implementation Committee (BPIC) and its Environmental Watering Working Group (EWWG), the Southern Connected Basin Environmental Water Committee (SCBEWC), and through state advisory groups. Advice was taken into account in developing the 2016-17 Priorities. Preparation for the *Basin environmental watering outlook 2016-17* (Outlook) commenced in January 2016. This preparation phase included consultation with environmental water holders and Basin States through a range of meetings, workshops and discussions, including through the inter-jurisdictional forum of the BPIC and its EWWG. In addition to this consultation, stakeholder feedback during 2015-16 had indicated another feedback mechanism would be advantageous. MDBA responded by developing a stakeholder survey that accompanied the 2016-17 Outlook published in April 2016 seeking feedback on it. While there was a very low response rate to the survey, where possible the stakeholder feedback was incorporated into the development of the 2016-17 Priorities. Given the low response rate, it was considered that a more targeted and direct approach would be more effective in the future. Publication of the 2016-17 Outlook also provided an opportunity for the CEWH and Basin States to comment on the proposed Basin annual environmental watering priorities through the BPIC and its EWWG. The MDBA did not receive any additional requests from the Basin States to provide advice for the preparation of state watering priorities for the 2016-17 water year. Each of the Basin States provided the MDBA with annual environmental watering priorities by early June 2016. In developing the Priorities for 2016-17, the MDBA considered these State priorities by:
	b) The MDBA will provide advice to Basin States in developing their annual environmental watering priorities, if requested.	
	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.	
	d) The MDBA will have regard to the annual environmental watering priorities provided by the Basin States.	
	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.	
	f) The MDBA will publish the Basin annual environmental watering priorities.	

		• reviewing them against the Basin environmental watering strategy quantitative environmental outcomes • applying the basin significance assessment • assessing potential synergies and or conflicts. New information gained from the review of the States' priorities was incorporated into the 2016-17 Priorities prior to their publication on the MDBA website by 30 June 2016. As a consequence of the wetter conditions that developed from May 2016, the Priorities were updated in November 2016 to add five more priorities to make the most of available water.
	g) The MDBA will seek stakeholder feedback on the process for developing Basin annual environmental watering priorities to inform the process in the following year.	The MDBA sought feedback on the process to develop the 2017-18 Basin annual environmental watering priorities from the BPIC and its Environmental Watering Working Group and through state advisory groups. This included the MDBA attending a number of MLDRIN and NBAN meetings and working collaboratively with the delegates to include Aboriginal perspectives in the processes for developing annual environmental watering priorities.
	h) 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.	The following advice was provided by the States in relation to whether the Basin annual environmental watering priorities for 2016-17 had been met: Queensland: reported there are no instances where the priorities for 2016-17 were not followed. NSW: has not yet provided its Statement of Assurance for 2016-17. This means the MDBA has not yet received advice from NSW about its compliance with the 2016-17 Priorities. ACT: In the ACT, there is only planned environmental water held within water supply storages managed by Icon Water and delivered as prescribed by the ACT Environmental Flow Guidelines (EFG). Hence the ACT considers the EFG to be the basis of their annual environmental watering priorities. While the information provided by the ACT is limited, it has in the past tried to highlight the current condition of the ecosystems in the territory and any discretionary water management levers that Icon Water may use during the year which might influence water management downstream. It is anticipated that as ACT finalises its Long term Water Plan including the review of the EFG which has been completed their annual watering priorities will be refined. The ACT reported it has met its requirements under the Basin Plan and that no instances of non-compliance or partial compliance were detected.

		Victoria: It was previously noted that for the 2015-16 reporting period Victoria had not followed the Moira grass priority. However, for 2016-17 Victoria reported the objective to prevent deterioration of Moira grass in Barmah-Millewa Forest was achieved. Victoria reported that while the CEWO elected not to water Barmah due to natural resource management issues, holdings of the VEWH were used and the forest received natural floods which prevented deterioration. South Australia: reported the delivery of planned and held environmental water was consistent with the Basin Plan and in accordance with the Basin annual environmental watering priorities. MDBA: There were no instances where the priorities for 2016-17 were not followed by the Living Murray program (TLM). Details of relevant TLM priorities are in the table: Statement of reasons why BAEP not followed.
The implementation of the environmental management framework (Chapter 8, Part 4)		
C4 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) *Applicable to Schedule 12 Matter 10, Indicator 10.2*	Describe how coordination, consultation and cooperation occurred including with other governments in preparing watering strategies, plans and priorities, as obligated in Part 4 of Chapter 8, as well as the matters to which regard must be had (10.2.1) Describe how coordination, consultation and cooperation made a difference in preparing watering strategies, plans and priorities (10.2.2)	The Southern Connected Basin Environmental Water Committee (SCBEWC) coordinates the operational planning and delivery of environmental water consistent with the Basin Plan Environment Management Framework (Part 4 of Chapter 8 of the Basin Plan). SCBEWC includes holders/managers of environmental water and river operators from across the southern Murray-Darling Basin. SCBEWC has two key roles, including to: • Coordinate the planning and delivery of all environmental water in the southern connected basin to maximise environmental outcomes (note decisions in relation to the allocation of water from the respective portfolios are retained by the environmental water holders) • Make decisions on the planning and use of Jointly-held environmental water available under TLM portfolio, River Murray Increased Flows and River Murray Unregulated Flows. In November, Ministerial Council approved a change to the Terms of Reference for SCBEWC to fully encompass the functions of two former committees - The Living Murray Committee and the Environmental Watering Group: • Approving annual TLM monitoring activities, reallocation of funds within icon site monitoring, management and Indigenous Partnerships Program budgets. • Approving revisions when needed to TLM Environmental Water Management Plans and associated schedules, e.g. environmental works operating plans and Condition Monitoring Plans. SCBEWC met regularly during 2016-17 to coordinate environmental watering activities across water holders in the Southern Murray-Darling Basin. This included seven meetings, an annual planning forum with the Water Liaison Working Group, and eight teleconferences.

		In advance of the water year, SCBEWC developed their plans to coordinate the delivery of environmental water in 2016-17 between water holders and to identify commitments of jointly held environmental water to particular watering actions. SCBEWC planning considered a range of matters including: • Requirements of the Basin Plan including the Basin-Wide Environmental Watering Strategy and Basin Annual Environmental Watering Priorities, • A range of environmental water proposals for different water resource availability conditions (i.e. dry through to wet), • Opportunities for coordination amongst environmental water holders and broader planned river operations, • Modelling assessments, and • Potential delivery constraints and risks. During the year, environmental water holders regularly communicated to discuss the progress of watering actions, particularly in light of ever-changing flow conditions brought about by widespread rainfall. Example: The effectiveness of this coordination was highlighted in a number of locations, however a stand-out is the coordination of a variety of tributary and River Murray flows to South Australia during early Summer following a significant flood peak. Environmental water releases were carefully made across the River Murray, Murrumbidgee, Darling and Goulburn rivers on the recession of a flood peak to support environmental outcomes right throughout the system, whilst not exacerbating flooding impacts on communities. This required a large amount of communication, cooperation, coordination and consultation between a range of state and federal water and environmental management agencies, emergency management organisations and other stakeholders. Without this effective coordination and delivery, a range of important ecosystem and biological processes that were triggered by the natural floods, would not have been able to completed (e.g. mass native fish breeding and movement) to provide system wide benefits.
C5 How environmental watering principles were applied consistent with Chapter 8, Part 4, Division 6. *Applicable to Schedule 12 Matter 10, Indicator 10.3*	Provide at least one case study that demonstrates how environmental watering principles were applied and identify the relevant principles. **Principle 1:** Environmental watering to be undertaken having regard to the Basin annual environmental watering priorities **Principle 2:** Consistency with the objectives for water-dependent ecosystems **Principle 3:** Maximising environmental benefits **Principle 4:** Risks **Principle 5:** Cost of environmental watering **Principle 6:** Apply the precautionary principle **Principle 7:** Working effectively with local communities **Principle 8:** Adaptive management **Principle 9:** Relevant international agreements **Principle 10:** Other management and operational practices **Principle 11:** Management of water for consumptive use	**Principle 1:** Environmental watering to be undertaken having regard to the Basin annual environmental watering priorities *SCBEWC coordinates the use of environmental water in the southern connected Basin. This includes making decisions for the use of the jointly held* environmental *water portfolio (includes TLM portfolio, RMUF and RMIF), and coordination with the holders of other environmental water through developing the Operational Scenarios document. SCBEWC has regard to the Basin annual environmental watering priorities as part of this planning and prioritisation process as well as through delivery of environmental watering actions.* *Example: In* particular, SCBEWC assesses site proposals for environmental water against the Basin Annual Priorities as well as developing a range of water delivery scenarios that target watering events that are consistent with the priorities. **Principle 2:** Consistency with the objectives for water-dependent ecosystems. Jointly held environmental water was delivered consistent with the Basin Plan's objectives for water-dependent ecosystems. Ecological objectives targeted right across the River Murray system involved protecting and restoring water dependent ecosystems and their

		functions as well as building resilience against climate change and other threats. Example 1: Many of the sites at which jointly held environmental water is delivered are Ramsar listed. Sites also include important wetlands and a number of those, including the Lower Lakes, Coorong and Murray Mouth (LLCMM) are important for the life cycles of international migratory bird and threatened species. Jointly held environmental water was delivered to this LLCMM targeting multiple outcomes including reproduction of *Ruppia* (a seagrass that provides habitat and food for a variety of other species around it),fish and fringing veg outcomes. Monitoring results show that *Ruppia* has increased its cover and abundance in the South Lagoon in response to the large natural flows and environmental water delivered in 2016-17. Example 2: Protecting and restoring ecosystem functioning was also a priority. In the lower Darling, Environmental water managers recognised that there would be insufficient flow connectivity from the upper Darling to the River Murray during spring and summer as a result of diversions into Menindee Lakes. Managers also identified that providing such connectivity would also support native fish dispersal, Murray cod recruitment and flush poor quality water out of the system. In support of this opportunity, a number of environmental water holders, including jointly held environmental water (TLM portfolio), delivered water to provide flow connectivity. Watering achieved one of the best Murray cod spawning events on record, and improved water quality for local water users. Example 3: In order to support episodically high ecological productivity at the Chowilla Floodplain, the environmental watering works were operated to achieve a high-floodplain inundation in Spring. This event sought to contribute to the improvement in ecological health across large parts of the floodplain and in future years it's now hoped that the floodplain will be able to better support ecosystem productivity in the river reaches downstream. Example 4: Jointly held environmental water helped to build resilience in a range of species across the southern Murray-Darling Basin. A key example was supporting the growth and flowering of Moira grass at Barmah-Millewa Forest. This native species of floodplain grass is important for providing habitat and breeding sites for a range of birds, fish and frogs. When inundated, it also provides carbon to support downstream aquatic food chains that support our popular native fish species. Unfortunately, the effects of water extraction and river regulation have caused a significant decline in the area this grass within Barmah-Millewa Forest. In 2016, the large natural floods resulted in widespread inundation of Barmah-Millewa Forest, which greatly benefited water-dependent species such as Moira grass by providing good conditions for growth. This provided an opportunity for environmental water managers to deliver water to help extend low level inundation and ensure that the right flow conditions for flowering and seed set occurred. Many sources of environmental water, including jointly-held water, was used to implement this watering action. **Principle 3:** Maximising environmental benefits Jointly held environmental water is delivered in a way that maximises environmental outcomes. Planning for a release seeks to: • Achieve multiple benefits throughout the Murray and its tributary systems,

		• Coordinate with other environmental and consumptive deliveries and to share information with other environmental water managers and river operators, • Utilise local knowledge including that of local Indigenous communities through its Indigenous Partnerships Program, • Deliver water to the highest priority ecological demands, • Have regard to social and economic outcomes where possible – such as water-based recreational activities and improving water quality for towns and irrigation. • Enhance existing flow events for the benefit of the environment such as natural high flows or Inter-Valley Transfers of bulk consumptive water, • Achieve a more natural seasonal flow-profile by boosting winter/spring flows, • Plan for a variety of water availability scenarios that may eventuate in a given year, including very dry to wet. Example: One example that covers many of these aspects was the delivery of 85 GL of jointly held environmental water (combined event over 400 GL) through the Murrumbidgee River to mitigate the poor water quality effects of a major hypoxic 'blackwater' event following natural flooding, with return flows providing benefits to the lower River Murray ecosystems. In winter/spring, significant rainfall caused widespread flooding in the Murrumbidgee River. This flooding inundated large tracts of natural and farmland floodplain, flushing massive amounts of carbon and nutrients to the lower Murrumbidgee River causing a 'crash' in dissolved oxygen levels well below Basin Plan water quality targets. In many places, dissolved oxygen levels dropped well below critical oxygen thresholds that native fish can withstand and caused significant amounts of fish deaths. In response, local river managers formed an operational advisory group consisting of environmental water managers, site managers, river operators, and scientists from a variety of state and federal agencies. This group met regularly to discuss river flows, oxygen levels, current and expected impacts – especially to native fish – and to identify mitigation strategies. The group agreed that a large release of environmental water on the recession of the flood would provide pockets of water with higher amounts of dissolved oxygen that afford some respite for the native fish still surviving. It was considered that this action was a high priority, but that the event was to not exacerbate flooding impacts downstream and so was timed to coincide with the recession of the flood. Releases commenced in mid-Spring from Burrinjuck and Blowering storages, with large contributions from the Commonwealth Environmental Water Holder and the NSW Government's planned environmental water. Jointly held environmental water releases (TLM portfolio) followed seamlessly after these contributions had run out. Environmental water managers worked with river operators to ensure that these flows were not diverted for consumptive purposes in the Murrumbidgee River and jointly held environmental water, delivered at a time when it was subject to capture in Lake Victoria, was allowed to continue through to the Coorong in South Australia. The results of this watering action saw significant improvements to dissolved oxygen levels in the Murrumbidgee and returned levels to above minimum thresholds for native fish sooner than would have happened without it. As the vast majority of the return flows made it through to South Australia, they resulted in multiple environmental outcomes for the lower River Murray and its floodplains, the Lower Lakes and Coorong, by slowing the flood recession to enable many ecological processes to continue.

		Principle 4: Risks In coordination with other environmental water holders, site managers and river operators, jointly held environmental water is delivered having regard to a range of risks. Example 1: Environmental watering proposals submitted by site managers identified a range of risks associated with watering actions, and proposed appropriate mitigation measures. These were considered in the assessment of proposals against risk assessment criteria and lower risk activities scored higher for these criteria. This risk information was then used by SCBEWC in assisting with decisions on the commitment and use of jointly held environmental water. Example 2: The 2016-17 SCBEWC Operational Scenarios planning document considered a number of risks for the year including: • Third party impacts such as unintended inundation impacts on private property • Unintended water quality impacts arising out of watering actions such as creation of hypoxic blackwater events or salinity spikes • Unintended benefits for invasive species such as carp and weeds • Testing of floodplain environmental watering works • Impacts to environmental watering actions caused by river operations or resource management restrictions inhibiting delivery of environmental water This document was shared and agreed by all environmental water holders and river operators. Example 3: Where available, modelling was used to help identify risks such as poor water quality and third-party impacts for TLM watering actions. Real time data was gathered to inform management of specific risks associated with TLM and coordinated environmental watering actions. For example, TLM environmental water was being used to initiate and support the recruitment of Murray cod in the lower Darling River in Spring. It was planned that once the cod had spawned and the eggs hatched, that Darling River flows would be increased to improve the chances of the young cod surviving. However, the flood occurring in the River Murray meant that there was a small chance that the increase in flows might impact on flood levels at the town of Wentworth. Flow level data gathered from the Murray and Darling was used to monitor this situation closely and to identify the most optimal point at which to increase lower Darling flows once the flood threat had passed in the Murray. This watering action was coordinated with the Commonwealth Environmental Water Holder and NSW and resulted in the largest cod breeding event in that system for 20 years. There were also improvements in water quality for local consumptive users and the event also supported dispersal of golden perch. **Principle 5:** Cost of environmental watering The cost of environmental watering was considered in the process of prioritising jointly-held watering proposals for jointly-held environmental water that were submitted by the Basin states at the start of the year. Joint governments provide funding under the Murray-Darling Basin Agreement ensures that there are sufficient resources to support the cost of environmental water portfolio management as part of delivering coordinated natural resource outcomes in the southern Basin. Example: Early in the year, water managers committed large volumes of jointly held environmental water to support a planned 'high floodplain' watering event at the Chowilla

		Floodplain using the Chowilla Environmental Regulator and ancillary works. However, the high natural unregulated and flood flows that occurred in spring provided the conditions necessary for this event, and the environmental water originally ear-marked was able to be delivered elsewhere to other priority watering actions. This event tested the environmental watering works to almost their full capacity, and also inundated large areas of floodplain that had not been inundated since 2010-11. Monitoring results show the following environmental outcomes: • Positive vegetation response right across the inundated areas of the floodplain; most notably including significant areas of black-box at mid-high elevations • Improved habitat and feeding opportunities provided for wildlife, including particular bush birds, waterbirds, frogs • a variety of native fish recorded across the floodplain. This ability to adjust to changing conditions as they arose and optimise the use of the environmental water portfolio saved expenses associated with the use of the entitlements while capitalising on the previous investment in works at the site by fully commissioning the works using natural flows. **Principle 6:** Apply the precautionary principle Jointly-held watering activities seek to maximise environmental outcomes and are informed by the best-available data, scientific theory, expert opinion, local knowledge and on-ground information. At times SCBEWC may undertake watering actions that may not have full scientific certainty. Under these circumstances the positive ecological benefits derived from environmental water delivery are considered against the potential risks associated with the watering action and the risks of not watering. Mitigation strategies are used where possible to lower any associated risks with watering and risks are carefully monitored during water delivery. For example, following the peak of the spring flood at Barmah-Millewa Forest there was an opportunity to deliver environmental water to maintain 15,000 ML/day downstream of Yarrawonga to ensure completion of key biological/ecosystem processes and functions – including the flowering and seed-set of Floodplain marsh (open wetland) plant communities. While river regulation and a lack of suitable flooding is the biggest impact on the open plain wetlands of Barmah-Millewa Forest, other impacts such as grazing pressure from non-native pest animals can impact on outcomes. TLM managers assessed this risk as having a low impact. This was based on the plentiful rainfall and large flood across the Barmah-Millewa Forest providing wide-spread green growth, meaning grazing pressure on the open plain wetlands would likely be minimal. The decision was taken to contribute environmental water to this event and results showed that the benefits of undertaking the event significantly outweighed any impact of pest animal grazing. **Principle 7:** Working effectively with local communities Icon site managers enable local community involvement on behalf of the jointly funded environmental water coordination program (TLM). This includes consultation during long-term planning activities and before, during and after watering events. Icon site managers

		also coordinate community reference groups that provide advice and help to disseminate information. For example, the Icon Site Manager at Koondrook-Perricoota Forest prepared a development application to enable the Koondrook-Perricoota Forest Flood Enhancement Works to discharge flows downstream in Barbers Creek to 'bank-full' levels. This proposal will enable the works to be operated as originally intended to provide a more natural inundation regime for the forest. A key goal for this 'Alternative Downstream Flow Options' (ADFO) project was to identify locally-driven solutions to managing potential third party flooding impacts in Barbers Creek that might arise from the proposed 'bank-full' flows. In 2016-17, the Icon Site Manager led a range of consultation activities to achieve this – meeting with affected landholders; a range of community representative bodies; and local, state and federal government agencies at key stages of the ADFO project. The progress is encouraging with proactive stakeholder participation into the identification and assessment of a suite of concept design options. **Principle 8:** Adaptive management Adaptive management principles were applied throughout the planning and delivery of jointly held environmental water in 2016-17: • Long-term monitoring and intervention monitoring results were used to develop and assess environmental watering proposals. • Real-time information allowed managers (through operational advisory groups) to respond to changing river and climatic conditions. . • 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 usefulness to inform future planning and management. • The environmental water coordination program (TLM) organises bi-annual Icon Site Managers meetings where they present to each other the recent successes and challenges faced at each of their respective sites. In particular, they share the learnings they have made from their watering actions as well as from their monitoring activities. This enables the different site managers to learn and improve management practices more quickly and effectively. • At a system level, the Southern Connected Basin Environmental Watering Committee held a review of their activities to assess recent performance and identify improvements. The most recent review led to the commencement of a longer-term project to improve the management and coordination of environmental water in the southern Murray-Darling Basin which is continuing. **Principle 9:** Relevant international agreements Jointly held environmental watering actions were undertaken at a range of sites (including Icon sites) across the Southern Basin during 2016-17. Many of these sites are listed under the international Ramsar Convention on Wetlands. Environmental watering supports many aspects of the Ramsar ecological character description for these sites.

		The icon sites also support water-dependent ecosystems that support the life cycles of species of birds listed under international agreements. **Principle 10:** Other management and operational practices The MDBA and the Basin states continue to review and improve river management and operational practices to improve capacity to manage the river to meet multiple objectives. Key examples include the ongoing development of river operations environmental guidelines, identification of opportunities during annual operational scenario planning and the development of rules applicable to annual environmental watering trials (and periodic revisions to the Objectives and Outcomes for River Operations in the River Murray document). These improvements are progressively being trialled and implemented. For example, 2016-17 was the first time water was released from Menindee Lakes and Lake Victoria during unregulated flow periods in the River Murray. The rules for this were approved by the Basin Officials Committee through the 2016-17 Environmental Watering Trial. This action afforded the ability to support recruitment of Murray Cod in the Lower Darling, provide a refuge from hypoxic blackwater for fish around the Lake Victoria outlet, and provide the flows necessary to support *Ruppia* outcomes in the Coorong. **Principle 11:** Management of water for consumptive use, consistent with achieving environmental objectives where possible. Environmental Water Holders, are in regular consultation with MDBA and state-based river operators to help ensure that the management of water for consumptive and environmental uses is integrated to provide the best possible outcomes while delivering water as efficiently as possible. For example, in autumn/winter a rainfall-rejection event occurred when irrigators cancelled water orders that had already been released from storages. This resulted in a 'pulse' of water traveling down the river. The rules for managing the Lake Victoria storage, meant that river operators could allow this pulse to continue right through to the end of the system to the sea. In addition to the other environmental water deliveries at the time, this pulse helped to provide variability in the flows that afforded feeding and migration opportunities for native fish. For example pouched lamprey, attracted by the additional discharge, were recorded moving through the barrage fishways when this pulse reached the sea.
Basin-wide environmental watering strategy (ss8.13 - 8.17 & 8.49 - 8.51; Schedules 8 & 9)		
C6 Prepare a Basin-wide environmental watering strategy. *Applicable to BPIA Task 50.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	Not relevant for the 2016-17 reporting year.

D. Critical Human Water Needs

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
The implementation, where necessary, of the emergency response process for critical human water needs.		
D1 The number of days in the water accounting period that Tiers 1, 2 and 3 water sharing arrangements have been applied. *Applicable to Schedule 12 Matter 13, Indicator 13.1*	Provide a summary of the number of days that tiers 1, 2 and 3 water sharing arrangements have been applied.	Tier 1 water sharing was applied for 366 days. There were no days of Tier 2 or Tier 3 water sharing in the River Murray System, and the emergency response process for critical human water needs was not implemented.
Process for managing risks to critical human water needs associated with inflow prediction (s11.07)		
D2 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. *Applicable to BPIA Task 63.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will assess and manage the risks to critical human water needs associated with inflow prediction and in conducting its river operations functions. 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. Each determination of annual water availability is calculated using data and models agreed to by each of the Basin States. 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.	The MDBA assesses risks to critical human water needs associated with inflow prediction through its annual operating plan and water resource assessment processes. Both processes use a range of water availability/inflow scenarios to consider risks to: • the risk of insufficient conveyance water • the risk of insufficient water for the conveyance reserve • the need for advances under clause 102C or Schedule H of the MDB Agreement; and • risk of reaching any water quality and salinity triggers. No risks or need for advances were identified for 2016-17. Further information is available in the River Murray System Annual Operating Plan 2016-17 (1 June 2016 to 31 May 2017). The determinations of annual water availability was calculated using data and models agreed to by each of the Basin States.
D3 Undertake water resource assessments.	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:**	The MDBA prepared Water Resource Assessments as required by General Objective 4.2 on water storage and delivery and accounting and Special Objective and Outcome 14 on the Maintenance of the Water Resource Assessment model, including the model code and associated data. The latter included the MDBA consulting with the Water Liaison

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Applicable to BPIA Task 63.2	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.	Working Group regarding projections of water availability in the River Murray System.
Risk management approach for inter-annual planning for critical human water needs arrangements (s11.08)		
D4 Undertake inter-annual planning for critical human water needs. *Applicable to BPIA Task 64.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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 *Objectives and Outcomes for River Operations in the River Murray System*; 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. 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. 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. 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.	The MDBA's risk management approach for inter-annual planning for critical human water needs was 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 Objectives and Outcomes for River Operations in the River Murray System; 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. From January to June 2017 the MDBA prepared a forecast of the water available in 2016-17 and 2017-18 water years. The second year forecast for 2017-18 was 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. The MDBA used information from the State data providers and the existing River Murray Water Quality Monitoring Program as the basis for identifying water quality risks to critical human water needs. When making decisions about the volume of water available to the Basin States in the 2016-17 and 2017-18 water years, and whether water can be set aside for the conveyance reserve, the MDBA had regard to the Water Resource Assessments which formed the basis for decisions on the water available to Basin States, including if water can be set aside for the conveyance reserve.
Commencement and cessation of Tier 2 water sharing arrangements (ss11.09 & 11.10)		
D5 Determine if the trigger is reached and Tier 1 or 2 applies. *Applicable to BPIA Task 65.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA, through the preparation of the Water Resource Assessment, will determine if the triggers detailed in BP s11.09 have been reached, or if the appropriate conditions apply. The MDBA will publish a notice on its website declaring that:	Through the preparation of the Water Resource Assessment, the MDBA considered if the triggers detailed in BP s11.09 have been reached, or if the appropriate conditions applied to leave Tier 1 water sharing. As they did not, Tier 1 applied throughout the period and no trigger condition for commencing Tier 2 water sharing was met. As a result the MDBA, did not publish a notice on its website declaring a change to water sharing.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
	• 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. The *Guideline on the triggers and process for moving between water sharing Tiers* provides more information on how the MDBA will communicate a change in water sharing arrangements to the Basin States and Commonwealth.	
Commencement and cessation of Tier 3 water sharing arrangements (ss11.15 & 11.16)		
D6 Determine if the trigger is reached and Tier 3 applies. *Applicable to BPIA Task 66.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. The MDBA will publish a notice on its website declaring that: • 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. 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. The *Guideline on the triggers and process for moving between water sharing Tiers* provides more information on how the MDBA will communicate a change in water sharing arrangements to the Basin States and Commonwealth.	Through the preparation of the Water Resource Assessment, the MDBA considered if the triggers detailed in BP s11.15 have been reached, or if the appropriate conditions applied to leave Tier 1 water sharing. As they did not, Tier 1 applied throughout the period and no trigger condition for commencing Tier 3 water sharing was met. As a result the MDBA, did not publish a notice on its website declaring a change to water sharing.

E. 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) / Targets for managing water flows (s9.14)		
E1 Prepare and publish guidelines relating to water quality targets. Have regard to flow-related targets on dissolved oxygen, recreational water quality and levels of salinity when making decisions about the management of water. *Applicable to BPIA Task 54.1 and 57.1*	The MDBA will prepare a proposal for consideration by the Basin Plan Implementation Committee for a new guideline providing additional guidance in relation to flow management decisions by the MDBA, Basin Officials Committee and Basin States and in relation to environmental water use decisions by the Commonwealth Environmental Water Holder and other environmental water holders and managers. BPIC will then decide the process for the guideline to be developed. Schedule 12 requires the parties to report on the extent to which they have had regard to the targets. The Chapter 13 guideline will provide guidance on meeting the reporting requirements related to the obligations identified in this section as per Schedule 12.	In March 2016, BPIC recommended that consultation on the draft guidelines relating to water quality targets for flow management be carried out through the existing MDBA advisory committees. The MDBA developed a draft guideline relating to water quality targets for flow management. In 2016-17 MDBA consulted with water quality experts from state governments, river mangers and Commonwealth Environmental Water Holder to refine the draft guideline. Upon endorsement of the draft by MDBA advisory committees, the guideline will be provide to BPIC in 2017-18. Regardless of the availability of a guideline, the MDBA, Basin Officials Committee, Basin States and the Commonwealth Environmental Water Holder must continue to have regard to the targets identified at s9.14 of the Basin Plan under the common law principal (s1.07 Note of the Basin Plan).
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.		
E2 Regard had to the targets in s9.14 when managing water flows. *Applicable to Schedule 12 Matter 14, Indicator 14.1*	Summary of how the Authority 'had regard' to water quality targets when managing water flows. Statement that procedures and tools were in place, and how these were used in the reporting year. Reporters to provide a case study where possible.	The MDBA, in performing its functions under the Agreement relating to the management of water flows in the Murray system and its involvement in the Lower Darling, has had regard to water quality targets as follows. For all water quality targets: • Regular monitoring of available operational water quality data and consideration of this data in daily operational decisions. • Maintaining minimum flow rates at specific locations in accordance with the Objectives and Outcomes for River Operations in the River Murray System. • Continuing to review and discuss real time water quality data, as well as current and future requirements for water quality monitoring, with relevant state agencies and environmental water holders. • Managing overbank flows to achieve environmental outcomes in a manner which had appropriate regard to the management of water quality risks. For dissolved oxygen, regard is demonstrated by the operational actions following the 2016 flood event. This natural event inundated extensive areas of the floodplain which led to high levels of dissolved organic carbon entering the system and creating a widespread hypoxic black water event. The MDBA, in operating the River Murray undertook the

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		following actions to attempt to mitigate, or facilitate attempts to mitigate, hypoxic blackwater where possible: • Reporting and discussing real time dissolved oxygen levels issues and potential mitigation measures with environmental water holders. • Increasing releases of high oxygenated water from Lake Victoria to maintain Rufus River as a refuge for native fish. • Requesting that certain flow gauges be fitted with temporary dissolved oxygen probes and adding the resultant data to operational spreadsheets (e.g. during the blackwater event DO probes were added to the Wakool Junction and Euston gauges to assist in tracking the hypoxic water as it moved through the system); • As flows receded downstream of Yarrawonga, MDBA coordinated discussions with state agencies and blackwater experts to determine target releases from Yarrawonga to improve dissolved oxygen levels throughout the Barmah-Millewa forest. • Delivering oxygenated environmental water from Weir 32 to the Murray. • During the peak of the blackwater event, regulators at Hattah (Messengers and Oateys) remained opened, which provided a local refuge for native fish as oxygen levels in the Hattah system generally remained above levels in the Murray. Regarding salinity, levels along the River Murray system were relatively low during 2016-17. However there were occasions where salinity levels were above the Basin Plan target range due to externalities on MDBA operations. High salinity levels at Burtundy were recorded when the Lower Darling commenced to flow. During this time, the direction of flows in the Lower Darling was managed by WaterNSW. The MDBA worked with WaterNSW to mitigate the impact of high salinity in the Lower Darling by lowering the pool level at Wentworth Weir to 40 cm below FSL in September. The weir pool was lowered in order to hasten the downstream passage of the highly saline water from the Lower Darling. High salinities were also recorded at Morgan on the recession of the 2016 floods however these remained below the Basin Plan target for Morgan of 800microS/cm. The widespread algal blooms that occurred 2015-16 continued into July 2016 along the Murray and Edward-Wakool and into August at Lake Menindee. MDBA had regard to the Basin Plan blue green algae targets by: • Maintaining high river levels in the Murray as high as was practicable when delivering downstream demands whilst operating the system as efficiently as possible. Operating in this way is intended to steer conditions towards those less favourable to algal blloms. • Participating in Murray and Sunraysia Regional Algal Co-ordinating Committee meetings to keep abreast of the latest information on the blooms and

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		contributing to the monitoring of blue green algal levels along the Murray at key locations. • Including blue-green algal alert banners and algal updates on the River Murray data web page (during the algal bloom) in the weekly reports.
E3 Regard had to the targets in s9.14 when making decisions about the use of environmental water. *Applicable to Schedule 12 Matter 14, Indicator 14.2*	Summary of how MDBA 'had regard' when making decisions about the use of environmental water. What procedures and tools were in place to enable water quality targets to be met? Statement that procedures and tools were used to meet water quality targets in the reporting year. Reporters to provide a case study where possible.	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. The Southern Connected Basin Environmental Water Committee (SCBEWC) has a risk management strategy to identify, evaluate and manage risks associated with coordinating the delivery of environmental water and a framework for managing salinity spikes. As outlined below, a range of management arrangements and tools have been developed to assist decision making about the use of environmental water and have regard to the targets in s9.14. **Watering proposals** The planning and delivery processes for environmental water in the southern connected Basin has regard to the Basin Plan water quality targets. Using the tools outlined below, jurisdictions and site managers are asked to assess the risk of proposed watering actions and provide appropriate mitigation strategies when developing watering proposals. These watering proposals are reviewed by the SCBEWC, having regard to the risk management strategy, to prioritising watering actions. **Operating plans for environmental works** 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. **Modelling** 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. 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 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.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		SCBEWC operational salinity risk management framework 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. There is a hydrodynamic model for the Coorong, Lower Lakes and Murray Mouth. This model can be 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. **Monitoring** 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. Other sources of data are available from state-based staff who record water quality data from spot readings during watering actions at icon sites. During the real-time management of jointly-held watering events this information is reviewed by Operational Advisory Groups (OAGs); further information on OAGs is presented below. **Operational Advisory Groups (OAGs)** 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. Before and during watering events, OAGs meet on a weekly basis to discuss a range of operational matters including flow management, inundation extents, risk management, ecological responses, engineering issues, fishway operations and water accounting. To inform OAG discussions, the MDBA produces reports which present recent data and information about flows, water quality, inundation extents and water accounting associated with the event. These reports also form a detailed record of the watering events. Please refer to the water quality management example in the Darling River (Principle 2, section C5) Murrumbidgee River (Principle 3, section C5). These explain how environmental water managers and river operators can have regard to managing water quality including the operational targets in the Basin Plan.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
E4 Conduct a review of the water quality targets in the water quality and salinity management plan and conduct a review of the environmental watering plan. *BPIA task 73.1*	The MDBA will scope the reviews of the water quality and salinity management plan targets and of the environmental watering plan 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. While currently scheduled for 2017, this review may be changed to 2020 through upcoming Basin Plan proposed amendments. The MDBA will utilise the 2017 Evaluation of the effectiveness of the Basin Plan as one step in the way to the 2020 review of water quality targets.	The Basin Plan amendments have proposed to change the timing of the review of environmental watering plan and water quality targets in the water quality and salinity management plan to 2020. A decision on this proposed amendment is likely in early 2018. Pending approval of the proposed changes to the Basin Plan, the MDBA will utilise the 2017 Evaluation of the effectiveness of the Basin Plan as one step in the way to review of water quality targets and the environmental watering plan.
E5 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)? *Applicable to Schedule 12 Matter 14, Indicator 14.3 and BPIA Task 54.2*	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). Once this assessment has been carried out the MDBA will publish this assessment on its website.	The salinity at the five reporting sites (Lock 6, Morgan, Murray Bridge, Milang and Burtundy) is monitored continuously over the five-year reporting period (2012 – 2017). The targets at the reporting sites 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. Over the reporting period (July 2012 – June 2017), the assessment indicates that the targets have been met at all reporting sites except at Burtundy. The target value at Burtundy is 830 EC. Over the reporting period, the salinity at Burtundy was above the target for 36% of days. A record dry period in the Darling system led to low flows in the lower Darling, downstream of Menindee Lakes, resulting in over 1500 EC salinity at Burtundy from early March to mid-August in 2016. The lack of water available from Menindee Lakes made it difficult to take any actions to manage salinity in the lower Darling River. The outcomes of the assessment of achievement of targets at the five reporting sites will be published as part of the 2017 Basin Plan Evaluation report.
Salt export objective (s9.09)		
E6 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	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. The MDBA will use the approach for estimating salt export from the River Murray System to the Southern Ocean, Method 1: Observed data to estimate the discharge of salt out the Murray Mouth for 2015-16 and	The salt export objective provides that salt is flushed at a sufficient rate into the Southern Ocean. The approach for assessing the achievement of the salt export objective was developed by the MDBA. Using the Method 2 of the agreed approach to estimating salt export, an early estimate of the annualised rate of salt export over the barrages was about 0.87 million tonnes during the 3-year assessment period (July 2014 – June 2017). This is less than the Basin Plan's indicative figure of two million tonnes per year.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
tonnes per year. *Applicable to Schedule 12 Matter 14, Indicator 14.4 and BPIA Task 53.1*	Method 2: BIGMOD model for the Lower Murray from 2015-16, once the data has been provided by relevant Basin States. The MDBA will annually estimate salt export, and publish the estimate on its website. The MDBA will refine the Approach for estimating salt export from the River Murray System to the Southern Ocean, Method 3: BMT WBM 2-D hydrodynamic model in consultation with the BPIC – Water Resource Planning Working Group and the BPIC – Water Quality Taskforce in advance of the reporting period for which it may be used.	Although the annualised salt export over the reporting period is less than 2 million tonnes per year during the assessment period, the salt load that was passing Murray Bridge has gone over the Barrages, and Lake Alexandrian salinity remained low. This indicates that flushing of salt from the River Murray system has occurred. The details of the assessment of achievement of salt export objective will be published along with the 2017 Basin Plan Evaluation report. The refinement of approach for estimating salt export objective (Method 3) is yet to be progressed. This will be considered by the MDBA when the South Australian diversion data for the current approach is available in a timely and streamlined manner, which is an essential requirement for applying any refined assessment method.
Incorporating water quality targets, in State water resource plans (ss9.16 - 9.18)		
E7 Publish a map. *Applicable to BPIA Task 55.1*	A map that identifies each target application zone for water quality targets for fresh water-dependent ecosystems has been published on the MDBA website.	A map that identifies each water quality target application zone for water quality targets for fresh water-dependent ecosystems has been published on the MDBA website.
Application of salinity targets for the purposes of long-term salinity planning and management (s9.19)		
E8 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) *Applicable to BPIA Task 56.1 and Schedule 12 Matter 14, Indicator 14.5*	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. Basin Salinity Management 2030 strategy implementation reports against end of valley targets set out in Appendix 1 of Schedule B to the Murray-Darling Basin Agreement.	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. In 2016-17, the following activities were undertaken: • 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. • 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 keep an account of river salinity impacts in terms of credits and debits. • Implementation of the new Basin Salinity Management 2030 (BSM2030) strategy continued in accordance with the implementation plan agreed by the basin governments.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
		Following are the key achievements in 2016-17 for long-term salinity planning and management. • The Basin salinity target, which aims to maintain the average daily salinity at Morgan in South Australia at less than 800 EC for at least 95% of the time, was met. • The operation of salt interception schemes diverted approximately 395 thousand tonnes of salt away from the river system and adjacent landscapes. • NSW, Victoria and South Australia remained in a net credit balance position in the salinity registers. • The MDBA and Basin Governments collectively progressed key knowledge priority projects under BSM2030 for understanding delayed salinity impacts from past land clearing and irrigation development activities. The outcomes of the projects will be utilised in refining salinity management in the Mallee region of the Basin.

F. Water Trading

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
The implementation of water trading rules		
F1 Compliance with the Basin Plan water trading rules. *Applicable to Schedule 12 Matter 16, Indicator 16.1*	Authority to report on its obligations under the water trading rules.	The MDBA has outlined a further approach to assist states to implement the Basin Plan water trading rules, which aims to resolve a number of inconsistencies between state trading rules and the Basin Plan by mid-2019. The MDBA recognises that making changes to existing water plans separately to Water Resource Plan accreditation is resource intensive and duplicative. The MDBA has accordingly offered to provide advice about areas of concern of possible inconsistences with the Basin Plan water trading rules, with the aim of addressing major inconsistencies during WRP development. This approach does not address inconsistences that exist outside of water resource plans. As the regulator of the rules, the MDBA has responsibility to address non-compliance and inconsistencies with the Basin Plan water trading rules, and has a level of discretion about the tools are used to enforce the rules in any given circumstance. The MDBA takes a risk-based approach to compliance and regulation.
Restrictions on trade and their application (ss12.02 - 12.36)		
F2 Ensure trades are consistent with the water trading rules. *Applicable to BPIA Task 67.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. 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.	The MDBA has been working with states bi-laterally in relation to possible inconsistences with the Basin Plan water trading rules, as the majority of issues relate specifically to one state rather than all states. Regular updates in relation to resolving inconsistencies are provided to BPIC. The MDBA has published the *Strategic Priorities - Basin Plan water trading rules* policy. This policy allows the MDBA to prioritise its regulatory and compliance activities. Priorities may be adjusted over time, and MDBA will endeavour to review these bi-annually. The MDBA has published the *Strategic Priorities - Basin Plan water trading rules* policy. This policy allows the Murray Darling Basin Authority (MDBA) to prioritise its regulatory and compliance activities. Priorities may be adjusted over time, and MDBA will endeavour to review these bi-annually.
Declarations on allowable restrictions on permitted use of exchange rates (ss12.18 & 12.22)		
F3 Make a declaration on allowable restrictions on trade. *Applicable to BPIA Task 68.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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	The MDBA has not received any formal requests for a declaration of an allowable restriction from any of the Basin States.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
	website.	
F4 Make a declaration on permitted use of exchange rates. *Applicable to BPIA Task 68.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	No requests for any declarations of exchange rates trade were received from any of the Basin States during 2016-17. The MDBA published a written declaration of the decision to permit exchange rate trades from the Victorian Murray and South Australian Murray to the Goulburn, Campaspe and Loddon systems and the reasons for doing so on 18 August 2014.
Information and reporting requirements (ss12.40 - 12.51)		
F5 Publish information about water access rights and trading rules. *Applicable to BPIA Task 69.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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). The MDBA will not require information to be given more than once per water accounting period, unless information is changed.	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). A number of the links to state trading rules and IIO trade rules were updated during 2016-17 following advice from the Basin States and IIOs.
F6 Make water announcements generally available. *Applicable to BPIA Task 69.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** Water announcements will be published in a way that makes them likely to be brought to the attention of interested members of the community. 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.	In relation to announcements made on the Barmah Choke, the MDBA ensured they were generally available by publishing a media release as well as putting the release on the MDBA website. The MDBA has also maintained and improved the website that provides daily updates on the volume available for trade across the choke while the restriction is in place. The MDBA continued to manage sensitive water market information consistent with its protocol (introduced 2014). Staff engaged in business activities with access to sensitive water market information must have in place a signed statement acknowledging they will comply with the protocol prior to being provided with access to this information. The protocol is currently being reviewed. Refresher training was conducted with staff in key areas and included in mandatory training developed for all staff delivered in 2017-18.

G. Reporting Requirements

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Effectiveness Reports (s13.05)		
G1 Evaluate the effectiveness of the Basin Plan against the objectives and outcomes set out in Ch 5, 8 and 9. *Applicable to BPIA Task 71.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** MDBA Annual Effectiveness Report developed annually in consultation with the BPIC – Monitoring and Evaluation Working Group.	The MDBA Annual Effectiveness Report (the Basin Plan Annual Report) was released on 27 February 2017. The BPIC – Monitoring and Evaluation Working Group was consulted during the report's preparation and provided comments on draft versions of the report.
Conduct an audit to assess the extent of compliance with the Plan. (ss13.10 & 13.20)		
G2 Conduct audit. *Applicable to BPIA Task 74.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. 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.	MDBA did not conduct an audit with respect to the extent of compliance with the Basin Plan in 2016-17.
Assessments of trends in the condition and availability of Basin water resources (s13.11)		
G3 Undertake an assessment. *Applicable to BPIA Task 75.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. The assessment will be undertaken in consultation with the BPIC – Monitoring and Evaluation Working Group.	MDBA did not undertake an assessment in 2016-17. However, MDBA prepares an annual report on the effectiveness of the Basin Plan, which includes a high level overview of the condition and availability of Basin water resources, as well as the social, cultural and economic context of the Basin. MDBA also prepares an annual environmental watering outlook each year (as part of developing the annual environmental watering priorities) that looks at seasonal and ecosystem conditions. A more comprehensive annual report, called the 2017 Evaluation, will be released in 2017/18.
Assessment and improvement of monitoring evaluation and reporting capabilities		
G4 Conduct an	**Responses should address the following requirement(s) as**	Following the 2014 independent review of the Water Act 2007 (Cwth), the Government

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
assessment of monitoring, evaluation and reporting capabilities. *S 13.23, BPIA Task 76.1*	**outlined in the Basin Plan Implementation Agreement:** The MDBA will prepare a draft assessment in consultation with BPIC – Monitoring and Evaluation Working Group (by June 2017 – subject to Basin Plan amendments).	agreed to amend the Basin Plan to shift a number of Basin Plan reviews and evaluations (including this assessment of monitoring, evaluation and reporting (MER) capabilities) from 2017 to 2020 in 2020. The process for amending the Basin plan is still underway. Meanwhile, the Government also committed to undertake an "interim evaluation targeting key areas of interest to provide preliminary evaluation results to Basin communities, in 2017. The interim evaluation is scheduled for release in December 2017 and will contain a high level of assessment of MER capabilities. In consultation with BPIC – Monitoring and Evaluation Working Group, the MDBA will perform a more detailed assessment of MER capabilities following the interim evaluation in early 2018.

H. 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)		
H1 Identify and publish maps of the water resource plan areas. *Applicable to BPIA Task 38.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	The MDBA holds the relevant data and water resource plan areas. These are published on our website at: www.mdba.gov.au/publications/maps-spatial-data.
Assessment of water resource plans (ss10.01 - 10.55)		
H2 Assess water resource plans for accreditation. *Applicable to BPIA Task 58.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. Each Basin State will prepare water resource plans for the Plan's water resource plan areas. 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: • 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 consideration will be given to the relevant instruments following the completion of that review; • South Australia: water allocation plans; • Queensland: water resource plans and resource operations plans; and • Australian Capital Territory: water management plans.	An important milestone was achieved during 2016-17 with the accreditation of the first water resource plan – the Queensland Warrego-Paroo-Nebine. In addition, progress was made with the development of water resource plans in all jurisdictions with a small number progressing through the MDBA for informal feedback and assistance prior to their formal submission in the future. Recognising that the water resource plan requirements in Chapter 10 can be addressed differently as appropriate for the local conditions, levels of development and statutory and other arrangements, the MDBA provides the following resources to assist the development of WRPs: - A Handbook for Practitioners - WRP Position Statements - The annual Water Planners' Forum - Advice to the WRPWG and BPIC - Advice to each Basin State during the development of individual water resource plans Throughout 2016-17 the MDBA worked closely with Basin States to continue to provide support to plan development. A streamlined approach to Water Resource Plan development and assessment was provided to jurisdictions to outline the type of information sought on each provision. Further work is being undertaken for those provisions where a more detailed assessment is anticipated. Basin States and the MDBA have continued to use the WRPWG, the Water Planners' Forum and, where appropriate, BPIC to share learnings regarding the development of

	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. 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. 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. 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. 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.	water resource plans. The MDBA had an independent review undertaken of its water resource plan assessment process for the Warrego-Paroo-Nebine plan to inform future assessment activities. This has resulted in work being undertaken on documenting a water resource plan assessment framework to provide greater transparency and detail associated with the assessment process. The MDBA and Basin States finalised a risk assessment process to identify key risks to the timely finalisation of WRPs and commenced regular reporting upon this and on the progress with each WRP to BPIC to ensure that risks to finalising WRPs are identified and managed accordingly. This work has guided bilateral agreements between the MDBA and each Basin State regarding engagement protocols and time-lines for delivering each WRP. The MDBA convened a workshop of representatives from MLDRIN, NBAN and WRPWG to share information about Part 14 requirements of the Basin Plan and consideration of Aboriginal values in the risk assessment and planning process providing for a shared understanding of the requirements. The MDBA in collaboration with NBAN, MLDRIN and jurisdictions produced an animation for Aboriginal people explaining, in a culturally sensitive way, what a Water Resource Plan is, its purpose and how it links to the Murray Darling Basin Plan.
H3 Convene water planners' forum. *Applicable to BPIA Task 58.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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 *Handbook for Practitioners for Chapter 10, Water Resource Plan Requirements.*	The 4th Annual Water Planners' Forum was held on 16 – 17 May 2017. Through the input of the Water Planner's Forum Reference Group, the forum agenda theme was based on 'towards accreditation' and covered items such as building monitoring and evaluation into water resource planning; role and use of risk management in WRP development; managing for extreme events; having regard to Aboriginal uses and values in WRPs; and cross border issues. Planning will soon commence for the 5th Forum in 2018.
Development of an integrated hydrologic model across the Basin (s10.10)		
H4 Adopt eWater Source. *Applicable to BPIA Task 59.1*	The MDBA standard for water resource plan accreditation is eWater Source for water resource planning and operations, having regard to the modelling practices of Basin States and the nature of water resource plan areas and operational readiness of the model as it relates to a water resource plan area. The MDBA will consult on the development of eWater Source for hydrological models used as part of the method for determining annual permitted take with BPIC and the BPIC – Water Resource Planning	The MDBA has developed a model of the River Murray and Lower Darling in eWater Source. The model has been independently reviewed and assessed as being suitable to support water resource planning and modelling of salinity and salt interception works/measures. Work has commenced on configuring the model to support water resource planning work for the NSW Murray and Lower Darling, Victorian Murray and South Australian Murray. Queensland, Victoria and New South Wales continue to work on developing eWater

	Working Group, and agree separately with each Basin State on the timeframes for its adoption.	Source models of valleys within their jurisdictions. Queensland has developed Source models that will be used to support water resource planning in the Moonie, Condamine-Balonne and Border Rivers. NSW has a Source model of the Border Rivers that will inform water resource plan development.
Review of long-term diversion limit equivalence factors.		
H5 Review of long-term diversion limit equivalence factors. *Applicable to BPIA Task 61.1*	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.	A scope of work for revising the long-term diversion limit equivalence factors (also known as planning assumptions) was developed in 2015, including an agreement that states would provide the planning assumptions to MDBA by late 2016, where possible. Progress with this work has varied across jurisdictions. South Australia provided its draft planning assumptions for the SA River Murray in June 2017 for review by the MDBA. NSW has indicated that its work on planning assumptions is well progressed. Queensland, through the accreditation of its first water resource plan has completed its planning assumption for 3 SDL resource units. It is expected that the remaining Queensland areas will be provided when water resource plans are brought forward for assessment. Victoria also indicated that it was likely this would be done at the time of finalisation of each WRP. The MDBA is consulting on this matter bilaterally with states and with the BPIC – Water Resource Planning Working Group and BPIC, as appropriate.

I. 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)		
I1 Identify and publish the surface water sustainable diversion limit resource unit maps. Hold relevant data sets. *Applicable to BPIA Task 41.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. 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.	The MDBA currently holds the relevant data sets for SDL resource units, with maps available on the MDBA website. These maps are those used in both the Basin Plan 2012 and the amended Basin Plan, when finalised. The amended maps will not be published until the Basin Plan amendment are passed.
Identification of groundwater sustainable diversion limit resource units (s6.03)		
I2 Identify & publish groundwater sustainable diversion limit resource unit maps. *Applicable to BPIA Task 42.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will identify and hold relevant data sets and publish on its website maps that identify each groundwater sustainable diversion limit resource unit. The MDBA will consult with BPIC and the BPIC – Water Resource Planning Working Group as appropriate. 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.	The MDBA currently holds the relevant data sets for SDL resource units, with maps available on the MDBA website. These maps are those used in both the Basin Plan 2012 and the amended Basin Plan, when finalised. The amended maps will not be published until the Basin Plan amendment are passed.
Constraints Management Strategy (s7.08)		
I3 Provide annual reports to Ministerial Council on progress with implementing Strategy. *Applicable to BPIA Task 45.7*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will assess and report on progress against recommendations in the Constraints Management Strategy, in consultation with Basin States.	A Constraints Management Strategy Annual report has been provided to the Murray-Darling Basin Ministerial Council each year since the CMS was formally agreed in 2013. Each annual report is written in conjunction with the basin states and reports against the phased approach of Constraints projects.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
I4 Amend the Constraints Management Strategy as appropriate. *Applicable to BPIA Task 45.8*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	The MDBA, on behalf of the basin states, coordinated a number of investigations to help understand the risks and costs associated with implementing and mitigating constraints. Basin state governments are responsible for delivering constraints projects at a local-level, including consulting with communities and detailed project design and implementation. Projects to address constraints in all key focus areas, except the Gwydir, are part of the package of supply, efficiency and constraints projects submitted by states through the sustainable diversion adjustment mechanism process in the Basin Plan.
Development of methods for calculating supply and efficiency contributions (s7.14-7.17, 7.20, Schedule 6)		
I5 Advise Basin States on the feasibility of supply measure proposals. *Applicable to BPIA Task 46.2*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	The MDBA has provided assistance to the SDLAAC in assessing the feasibility of supply measure proposals through the provision of technical advice and modelling. The MDBA provides advice to the SDLAAC on each supply measure proposal against a subset of the BOC agreed guidelines for assessing supply measures. The MDBA also progressively provides adjustment estimates and advice to the BOC and Ministerial Council based on the integration of projects into the modelling framework. MDBA provided an interim assessment to Ministers of the SDL Adjustment volume based on the 37 notified supply measure projects in June 2017. The final advice to the Ministers will be provided by the end of 2017
I6 Develop alternative methods for determining supply contribution. *Applicable to BPIA Task 46.3*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** If agreed between the MDBA and BOC, the MDBA will develop alternative methods in consultation through SDLAAC.	Not applicable at this stage – Schedule 6 to the Basin Plan is currently the method to be applied.
I7 Develop proposed approach to incorporating efficiency measures into the SDL adjustment mechanism. *Applicable to BPIA Task 46.4*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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.	As efficiency measures are delivered, the MDBA will keep a register of the entitlements recovered. Long term diversion limit equivalence factors are used in converting the entitlement recovered into a long term volumetric offset. These factors are currently under review (see H5). Section 7.16 of the Basin Plan states "the ***efficiency contribution*** of the notified measures for each affected unit at a particular time is a decrease in the SDL for the unit equal to the quantity of water, in GL per year, that is registered as being available under the efficiency entitlements for the unit".
Notification and registration of measures (ss7.12, 7.13)		
I8 Maintain a register of	**Responses should address the following requirement(s) as outlined**	The MDBA has established a register of notified measures, published on the MDBA

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
notified measures and publish on website. *Applicable to BPIA Task 47.1*	**in the Basin Plan Implementation Agreement:** 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.	website. Where notifications are amended, as agreed by the BOC, the MDBA will update the register. One additional project was added and one removed from the register following the second notification in June 2017. The register was also updated at this time to incorporate amendments to a number of project notifications included within the first notification that were approved by BOC in June 2017.
Determining and proposing initial adjustment amounts (ss7.10, 7.15-7.20, 7.23)		
I9 Determine the amounts of proposed SDL adjustments resulting from any measures notified by 30 June 2016. *Applicable to BPIA Task 48.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. Before proposing an adjustment, the MDBA must seek and consider advice from BOC and submissions from members of the community.	Interim advice has been provided to Basin Governments as the package of notified measures are progressively integrated into the assessment framework. At this stage 36 of 36 measures in the first notification and one (of one) measure from the second notification have been integrated. Interim advice was provided to Ministers and Basin Officials Committee in April and June 2017 on potential contributions from notified supply measures. A draft determination of the full package of notified measures was circulated to BOC on 1 September 2017. The MDBA will now seek advice from BOC and submissions from the community on the SDL adjustment amounts, and consider this input in preparing any amendments to the Basin Plan.
I10 Propose SDL adjustments. *Applicable to BPIA Task 48.3*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will prepare amendments to the Plan, for adoption by the Minister (under section 23B of the Act). 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.	Following the determination of the SDL adjustment, the MDBA will prepare amendments to the Plan proposing SDL adjustments, for adoption by the Minister (under section 23B of the Act). Any proposed amendment will be presented to the Minister by 15 December 2017. The MDBA will provide advice on the potential impacts of SDL measures on RAMSAR wetlands as part of the amendment package.

J. 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)		
J1 Conduct research and investigations to inform reviews of the Basin Plan. Publish the results. *Applicable to BPIA Task 43.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. 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. The MDBA will publish its final report on research or investigations conducted to inform any reviews of the Plan on its website.	The MDBA completed the reviews of two NSW and one Victorian groundwater area in 2014/15 as required under s6.06 of the Basin Plan. The independent reviews suggested that SDLs in the three areas could be increased 'once assurances have been given by the relevant state to demonstrate that the resource will be managed by state policies and plans so as to limit impacts to acceptable levels'. Such assurances have been given by the states and it was agreed to link the proposed changes in SDLs to mandatory management controls in the review areas. In other words, any risks associated with increasing the SDLs are offset by mandatory local management rules. The review reports and associated synthesis reports have been published on the MDBA website. On the basis of these reviews, and the review into the Northern Basin SDLs, the Authority proposed an amendment to the Basin Plan. This was done in consultation with the Murray-Darling Basin Ministerial Council, Basin officials, the Basin Community Committee and members of the public. Read more about the proposed groundwater amendments here. During November 2016 and February 2017 the MDBA held around 50 meetings and received in excess of 2,000 submissions on the proposed amendment. The proposed amendment including some revisions was given to the Ministerial Council for comment in May 2017 and a joint notice was received from the Ministerial Council on 16 June with suggestions for minor changes. No changes to either the groundwater or northern Basin SDLs have been made since the amendment was proposed in November 2016. The outcomes of the groundwater reviews will be implemented when the Basin Plan is amended.
J2 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.	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** 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. The MDBA has established a Northern Basin Advisory Committee (NBAC) to provide independent strategic advice to the MDBA on how an adaptive	The MDBA finalised a review of Basin Plan settings in the northern Basin, in close consultation with the New South Wales and Queensland governments, completing the work program commenced in 2012-13. The findings were shared at a number of community meetings across the Northern Basin in July/ August 2016. Based on the outcomes of the review and community feedback the Authority announced proposed amendments to the Basin Plan in November 2016., The proposed amendments included a reduction in the water recovery target from 390 GL to 320 GL provided there are commitments from governments to implement a range of toolkit measures. The Intergovernmental Working Group formally met a further 4 times in 2016/17, and there

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Applicable to BPIA Task 43.3	Basin Plan can be implemented in the Northern Basin. 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. 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 work program through 2015-16. 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. The Commonwealth has committed to provide $822,000 in Commonwealth funding for the *Floodplain vegetation watering requirements proposal*, 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.	were a number of other meetings, workshops and briefings with State officials in settling on the proposed amendments and toolkit measures. The Northern Basin Advisory Committee (NBAC) continued to provide advice and met a further 4 times before being wound up in December 2016, with 3 additional meetings on specific topics involving some NBAC members. The Committee prepared a final report providing advice and recommendations, including highlighting the importance of implementing a toolkit of complementary measures. MDBA consulted further with people in northern Basin communities on the proposed amendments (which included proposed changes to groundwater SDLs and some minor practical changes) during the submission period (November 2016 to February 2017). All submissions and feedback were considered following the closing of submission in February 2017. The proposed amendments and revisions were given to the Ministerial Council for comment in May 2017. Subsequently the Ministerial Council agreed to the proposed reduction in the water recovery target to 320 GL and agreed in principle to implement toolkit measures as set out in a proposed new schedule to the IGA, subject to the Basin Plan amendment being made. The Ministerial Council also suggested some further changes to the minor amendments. Just before the end of the financial year the proposed amendments and revisions were given back to the Ministerial Council for comment within a statutory 3 weeks. No changes to either the northern Basin or groundwater SDLs have been made since the amendment was proposed in November 2016.

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Establish and maintain assets and functions database (s8.48)		
K1 Establish and maintain assets and functions database. *Applicable to BPIA Task 52.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will prepare a draft strategy for developing and maintaining the environmental assets and functions database. The MDBA will consult on the strategy through the BPIC – Environmental Watering Working Group.	Further work was undertaken during 2016-17 on Proof-Of-Concepts to support future development of a pilot assets and functions database. This builds on Proof-Of-Concept work that commenced in 2015-16
K2 Establish and maintain assets and functions database. *Applicable to BPIA Task 52.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA will implement the strategy as agreed.	Not relevant for the 2016-17 reporting year
K3 Establish and maintain assets and functions database. *Applicable to BPIA Task 52.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** The MDBA may publish this database on its website.	Not relevant for the 2016-17 reporting year

K. Assessing Inflows

Reporting Matter	Supporting evidence to be provided by MDBA	Response/milestone achievement and compliance status
Process for assessing inflows (s11.06)		
K1 Monitor and review inflow volumes within the River Murray System. *Applicable to BPIA Task 62.1*	**Responses should address the following requirement(s) as outlined in the Basin Plan Implementation Agreement:** Within the River Murray System, the MDBA[1] 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.	The MDBA and the Basin States maintained a hydrometric network to monitor inflows. The MDBA continued its continuous monitoring and provided inflow scenarios by 30 June 2017. In preparing the Annual Operating Plan and Water Resource Assessments the MDBA used the processes set out in the Plan to prepare a range of inflow scenarios. The MDBA regularly reviews its inflow scenarios, including forecast inflows from the Snowy water licence, based on the calculations set out in Part III of Schedule F to the Murray–Darling Basin Agreement. This included allowing for low water availability. The River Murray System Annual Operating Plan 2016/17 and Water Resource Assessments were prepared in consultation with the southern Basin States, through the Water Liaison Working Group. Additionally the MDBA regularly monitored and reviewed inflow volumes and considered the best possible inflow information and forecasts available for use in water accounting and river operations, built relevant data sets and web-published weekly reports, Live river data, storage, flow and salinity forecast reports and web content.

[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."

Statement of reasons why watering not undertaken in accordance with Basin Environmental Watering Priorities (BAEWP) for 2016-17 (Refer Matter 10 – Indicator 10.3 and BP IA Task 20.2)

Section 8.44 of the Basin Plan (2012) requires that: If a person undertakes environmental watering other than in accordance with the Basin annual environmental watering priorities accessible on MDBA's website, that a person must give to the Authority a statement of reasons why environmental watering has not been undertaken in accordance with the Basin annual environmental watering priorities (8.44(1)). The person must give the statement to the Authority as soon as practicable, but in any event within four months after the end of the water accounting period in which the environmental watering was undertaken (8.44(2)). The Authority may publish on its website the statement of reasons given.

	Basin annual environmental watering (BAEWP) priorities for 2016–17	Jurisdictions to consider reporting	Please tick (x), where BAEWP not followed	Statement of reasons why BAEP not followed
River flows and connectivity				
1	Overarching: to provide longitudinal connectivity and variable flow patterns for water quality and ecological benefit — particularly for native fish.	NSW, Vic, Qld, SA, ACT, CEWH, TLM		
2	Maintain waterholes in the Lower Balonne Floodplain to provide critical refuge for water-dependent species.	Qld, NSW, CEWH		
3	Protect aquatic habitat conditions in the Coorong and support native fish movement by optimising flows into the Coorong and through the Murray Mouth. **November 2016 addendum:** Protect aquatic habitat conditions in the Coorong and support native fish movement by optimising flows into the Coorong and through the Murray Mouth. In particular, promote Ruppia recruitment by elevating water levels in the Coorong from October to December by building on the unregulated flows with environmental water.	SA, CEWH, TLM		

	Basin annual environmental watering (BAEWP) priorities for 2016–17	Jurisdictions to consider reporting	Please tick (x), where BAEWP not followed	Statement of reasons why BAEP not followed
Native vegetation				
4	Overarching: to water discrete locations that include threatened vegetation or support other threatened species and communities, including vegetation that is critical waterbird foraging or breeding habitat.	NSW, Vic, Qld, SA, ACT, CEWH, TLM		
5	Improve the condition of wetland vegetation communities in the mid-Murrumbidgee wetlands that provide critical habitat for threatened species and communities.	NSW, CEWH		
6	Improve the health and complexity of waterbird rookery habitat in the northern Narran Lakes system.	NSW, QLD CEWH		
7	**November 2016 addendum:** Prevent further critical deterioration of Moira grass in Barmah–Millewa Forest, subject to resolving natural resource management issues.	NSW, Vic, CEWH, TLM		
8	**November 2016 addendum:** Maintain inundation of floodplain areas for sufficient duration to: freshen groundwater; reduce soil salinity; improve health of mature trees; and promote recruitment of long-lived floodplain vegetation, including seed set and germination.	NSW, Vic, Qld, SA, ACT, CEWH, TLM		
Waterbirds				

	Basin annual environmental watering (BAEWP) priorities for 2016–17	Jurisdictions to consider reporting	Please tick (x), where BAEWP not followed	Statement of reasons why BAEP not followed
9	Overarching: to prevent further decline in habitat that supports waterbird breeding across the basin and thereby to help stabilise waterbird populations, albeit at lower levels than are sought over the long term.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		
10	**November 2016 addendum:** Capitalise on opportunities to support waterbird breeding. Sites in the Lachlan, Macquarie and Murray catchments now show potential for successful waterbird breeding in the coming months. At these sites, environmental water should be used to sustain the duration and depth of inundation so that the waterbirds can reproduce successfully.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		
Native fish				
11	Overarching: to protect drought refuge habitats, to maintain in-stream habitats, and to ensure existing populations of threatened species remain viable.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		
12	Contribute to the long-term recovery of silver perch by improving existing populations and enhancing conditions for recruitment and dispersal to and from suitable habitat.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		
13	Support viable populations of threatened native fish by protecting	NSW, Vic, ACT, SA,		

	Basin annual environmental watering (BAEWP) priorities for 2016–17	Jurisdictions to consider reporting	Please tick (x), where BAEWP not followed	Statement of reasons why BAEP not followed
	drought refuges and maintaining in-stream habitats and essential functions.	Qld, CEWH, TLM		
14	Maximise opportunities for range expansion and the establishment of new populations of silver perch and other threatened fish, as conditions allow.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		
15	**November 2016 addendum:** Contribute to the long-term recovery of threatened fish species, including silver perch, through range expansion and establishment of new populations. Environmental water can benefit silver perch recruitment by dampening sharp and extended drops in River Murray levels downstream of Yarrawonga during late spring and summer. Provision of water for small in-channel rises in Victorian tributaries and the Murray in summer and autumn will support dispersal of young silver perch.	NSW, Vic, ACT, SA, Qld, CEWH, TLM		