Information collection template for water year 2023-24 – MDBA

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The Murray-Darling Basin Authority 2023-24 report to satisfy reporting obligations for Basin Plan Schedule 12.

Reporting context

The matters listed in Schedule 12 of the Basin Plan relate to the objectives and outcomes against which the effectiveness of the Basin Plan will be evaluated (see section 13.05). The matters are also matters on which the Murray-Darling Basin Authority (MDBA), the Basin States, the Commonwealth Environmental Water Holder, and the Department are required to report. Schedule 12 includes Category A matters which are subject to 5 yearly reporting and Category B matters (see Table 1) which are subject to annual reporting.

This template covers MDBA 2023-24 reporting obligations in relation to Matters 4, 6, 10, 13, 14, and 16. Please refer to the notes for an explanation of why some Matters are not included in this template. The reporting period is the water year, 1 July to 30 June. The Basin Plan set the reporting day as 31 October in the calendar year that reporting periods ends.

Table 1. Schedule 12, Category B matters, annual reporting

#	Schedule 12 Annual Matters	Reporter			
4	The effectiveness of the management of risks to Basin water resources.	MDBA	Basin States		
5	The transition to long term average sustainable diversion limits.				Department of Environment, Energy, Climate Change and Water
6	The extent to which local knowledge and solutions inform the implementation of the Basin Plan.	MDBA	Basin States	CEWH	
9	The identification of environmental water and the monitoring of its use.	MDBA	Basin States	CEWH	
10	The implementation of the environmental management framework (Part 4 of Chapter 8).	MDBA	Basin States	CEWH	
13	The implementation, where necessary, of the emergency response process for critical human water needs.	MDBA	Basin States		Department of Environment, Energy, Climate Change and Water
14	The 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.	MDBA	Basin States	CEWH	
16	The implementation of water trading rules.	MDBA	Basin States		
19	Compliance with water resource plans.		Basin States		
20	The prioritisation of critical human water needs.		Basin States		
21	The accountability and transparency of arrangements for water sharing.		Basin States		

Notes:

- Reporting for Matter 4 by Basin States is reported through Matter 10, and through the process of water resource plan accreditation.
- Reporting for Matter 5 is reported separately by the Department of Climate Change, Energy, the Environment and Water.
- Reporting for Matter 9 is reported separately by Basin States, Commonwealth Environmental Water Holder and the MDBA, through Water Act s71 reporting, and through the Matter 9.3 reporting template.
- No reporting by the Department of Climate Change, Energy, the Environment and Water is required for Matter 13, as BOC undertakes this reporting when Tier 2 and 3 water sharing arrangements are in place.
- Reporting for Matter 19 (Compliance with water resource plans) is reported separately by Basin States.
- No reporting by Basin States is required for Matter 20, as confirmation that this Basin Plan requirement has been met will be via the process of water resource plan accreditation.
- Schedule 12 reporting requirements in this template have been informed by the Basin Plan Schedule 12 Reporting Guidelines developed in 2015. The Basin Plan Schedule 12 Reporting Guidelines include reporting indicators which are nested under relevant Schedule 12 matters.
- New guidance can be updated annually to help reporters meet reporting obligations and ensure the reporting requirements are up to date.
- The MDBA assumes everything provided in this template is Public, and Licensing would allow the information's re-use unless specifically notified.

The Basin Plan Schedule 12 Guidelines and this information collection template are inconsistent. This template sets out the current reporting requirements.

Matter 4: The effectiveness of the management of risks to Basin water resources

Reporting Matter	Supporting evidence to be provided by MDBA	Response
The effectiveness of the management of risks to Basin water resources (s4.03)		
Matter 4 Implementation and management of the risk strategies under s4.03 (3) of the Basin Plan. Applicable to: Basin Plan s4.03	**Reporting requirement:** Describe how regard was had to the risk strategies listed in s4.03. This should include how current and emerging risks to Basin water resources are being managed. If relevant, provide information about the development of guidance or guidelines that provides further advice on actions that may be taken to implement the risk strategies in s4.03.	Met ☒ Partially met ☐ Not met ☐ The MDBA continue to implement a range of strategies to better mitigate and manage risk to Basin water resources. These strategies include continued implementation of key elements of the Basin, such as implementation of the environmental watering plan, the monitoring and evaluation program, and assessment of water resource plans, as well as investment in new knowledge to understand key risks to Basin water resources. For example, the MDBA is investing in new knowledge to better understand the impacts that key risks such as climate change may have on Basin water resources and identify strategies to better mitigate and manage those risks. Throughout 2022-23 this has included: • Continued investment in new knowledge, through programs such as Murray-Darling Water and Environment Research Program (MD-WERP) and Basin Condition Monitoring Program • Collaboration with the Bureau of Meteorology to improve modelling and decision support tools for river management under a changing climate. • Work through the Integrated River Modelling Uplift project to ensure that the models are fit for the future climate, ready to answer questions and support river operation decisions into the future. Further information is available on the MDBA website. Our climate workplan | Murray–Darling Basin Authority

Matter 6: The extent to which local knowledge and solutions inform the implementation of the Basin Plan

Reporting Matter	Supporting evidence to be provided by MDBA	Response
The extent to which local knowledge and solutions inform the implementation of the Basin Plan.		
Matter 6 The outcome of engagement on the implementation of the Basin Plan. **Applicable to:** **Basin Plan Chapters 6, 8 & 10**	**Reporting requirement:** Provide a summary of how local knowledge and solutions informed implementation of the Basin Plan. This may include: • 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 This may include engagement activities related to water resource planning, First Nations participation in environmental watering, and the SDL Adjustment Mechanism. Holders of held environmental water and other relevant managers, should provide relevant examples of how they involved First Nations people when planning for environmental watering, including how: • Environmental water planning and/or delivery has been influenced by the outcomes desired by First Nations people • First Nations people have been engaged in environmental watering activities in an appropriate and empowering way using free, prior, and informed consent • Outcomes desired by First Nations people have been achieved through environmental watering actions • Capacity to participate in planning and influence outcomes in water management has been built among First Nations people **Notes:** Please provide links where appropriate to existing public information. Reporting on the involvement of involvement of First Nations in environmental water planning and/or delivery may be included in the Basin Plan Annual Report and/or the report on First Nations participation in environmental watering. Case studies are not required, but may be a useful way to describe how local knowledge and solutions inform implementation of the Basin Plan.	Met ☒ Partially met ☐ Not met ☐ **Local and Regional Engagement in Environmental Watering** Environmental water holders engage directly with local communities and First Nations via regionally relevant groups such as Environmental Watering Advisory Groups in NSW and Victoria, and Community Advisory Panel and Scientific Advisory Groups in South Australia. Community and scientific input along with First Nations cultural knowledge/values are incorporated into annual watering proposals developed by jurisdictions as part of their water planning each year. This information feeds into coordinated planning across all environmental water holders via the Southern Connected Basin Environmental Watering Committee (SCBEWC) and the Northern Basin Environmental Watering Group. Operational Advisory Groups (OAGs) facilitate conversations between local water managers, site managers and river operators to guide watering events in real time. For The Living Murray (TLM) program (coordinated by the MDBA), delivery partners including representatives from all six icon sites (Koondrook Perricoota Forest, Barmah-Millewa Forest, Chowilla Floodplain and Lindsay, Mulcra and Wallpolla Islands, Hattah Lakes, Gunbower Forest, Lower Lakes, Coorong and Murray Mouth and the River Murray Channel) are engaged via regular online meetings and face-to-face forums held 2-3 times per year across the various icon sites. **First Nations Engagement** During 2023-24 the MDBA commenced a comprehensive reset of our relationships with Basin First Nations. The MDBA engages with First Nations in line with the principles of Free, Prior and Informed Consent (FPIC) and with respect to Indigenous Cultural Intellectual Property (ICIP). These frameworks ensure First Nations people across the Murray-Darling Basin are engaged in an appropriate and respectful manner. This includes seeking consent to engage, asking how individual Nations would like to work with the MDBA (processes may differ) and providing adequate timeframes for their involvement. Depending upon the scale, location and style of project activities, the MDBA may engage with individual or multiple Nations, and/or First Nations' representative organisations. There are a number of groups that guide the MDBA and associated projects and these include; the Basin Community Committee (BCC) and its Indigenous Water Sub-committee, the Murray-Lower darling Rivers Indigenous Nations (MLDRIN), Native Fish Recovery Strategy Cultural Advisory Group (CAG), as well as the Sustainable River Audit (SRA) / Murray-Darling Basin Outlook projects via the First Nations Leadership Group (FNLG). **First Nations Participation in Environmental Watering** There has been continued progress in the engagement and involvement of First Nations in water management including the planning and delivery of water for the environment across the Murray-Darling Basin. Indigenous Facilitators employed via The Living Murray Indigenous Partnership Program (coordinated by MDBA) were active in project delivery and environmental water management at TLM icon sites throughout 2023-24. MDBA organised a face-to-face The Living Murray (TLM) Forum in May 2024, which brought together people involved in the program's delivery to share knowledge and foster collaboration in environmental water management. The 2024 Forum was co-hosted by Yorta Yorta Nation Aboriginal Corporation and the Goulburn Broken Catchment Management Authority. The 2024 Forum focused on current approaches and workshopping strategies for improvement in First Nations involvement in environmental water and growing First Nations involvement in the management and monitoring of TLM icon sites.

Reporting Matter	Supporting evidence to be provided by MDBA	Response
The extent to which local knowledge and solutions inform the implementation of the Basin Plan.		
		MDBA coordinate the Southern Connected Basin Environmental Watering Committee (SCBEWC), a multi-jurisdictional committee responsible for coordinating environmental water across the southern basin. Since 2020 Murray Lower Darling Rivers Indigenous Nations (MLDRIN) have been members of SCBEWC. SCBEWC members have committed to providing a culturally safe environment for First Nations attendees. In early 2023 SCBEWC undertook Cultural Safety training. This then flowed through to the establishment of Cultural Safety guidelines which were formally endorsed by the Committee in February 2024. The purpose of the guidelines are to outline attendees code-of-conduct expectations in order to provide a culturally safe meeting environment where First Nations attendees feel physically, spiritually, socially, and emotionally safe and are able to draw strength in their identity, culture and community. The guidelines will be periodically reviewed and updated. At a more localised level, First Nations input into SCBEWC annual watering proposals (which determine where water is delivered) was refined in 2023-24 based on collective feedback, which has resulted in watering proposal templates being simplified and easier to populate with a greater focus on ensuring close-the-loop feedback with Nations on how their advice informed environmental water delivery. During 2023-24 the MDBA collaborated with the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) to develop a First Nations chapter for the 2024 update of the Basin-wide Environmental Watering Strategy (BWS). MLDRIN hosted a series of in-person and online gatherings that supported the involvement of Traditional Owners from 21 individual Nations. Gatherings with multiple First Nation representatives and direct dialogue with Traditional Owners clarified key shared outcomes, objectives and priorities for the planning and delivery of water for the environment. MLDRIN also reviewed outputs from previous First Nations input to Basin-scale water planning, such as the First Nations Environmental Water Guidance (FNEWG) project (conducted between 2018-2021), and other key statements and research relating to First Nations involvement in environmental water planning. **First Nations input and advice to the Basin Plan Review** Four First Nations focused teams – Policy, Strategy, Relationships and Science and Knowledge were established in 2023-24. These teams are collectively working together to support the MDBA to develop culturally appropriate ways to meaningfully connect with First Nations peoples on activities aligned to the review of the Murray-Darling Basin Plan (2012) and with regard to the *Water Amendment (Restoring Our Rivers) 2023.* The MDBA First Nations Science and Knowledge (FNSK) team are developing First Nations project initiatives related to science and knowledge as part of the Basin Plan Review / Implementation. The team further supports First Nations participation in the planning and delivery of water for the environment, including associated on-Country monitoring activities. A number of projects are currently in development with First Nation groups in 2024. These projects will be First Nations led (via targeted competitive grants) and also co-developed through a collaborative science approach. Project initiatives are associated with Module 5 of the Murray-Darling Basin (MDBA) Sustainable Yields 2 (SY2) project: *First Nations People and Water Country: Response to Flows (FNPWC).* The FNSK team also supports First Nations to develop tactical collaborative science projects associated with the Murray-Darling Water and Environment Research (MD-WERP) Program.

Matter 10: The implementation of the environmental management framework (Part 4 of Chapter 8)

This	Supporting evidence to be provided by MDBA	Response
Indicator 10.1 Basin-wide environmental watering strategy, long-term watering plans and annual priorities were prepared, with the required content, published, reviewed and updated as obligated under Part 4 of Chapter 8, Divisions 2-5 **Applicable to:** **Chapter 8 Part 4**	***Context:*** *Under Part 4 of Chapter 8, Division 2 the MDBA is obligated to prepare annual watering priorities each year and prepare a Basin-wide environmental watering strategy.* **Reporting requirement:** Confirm that long-term watering plans and annual priorities were prepared, with the required content, published, reviewed and updated as obligated under Part 4 of Chapter 8, Divisions 2-4 If unable to confirm, provide a statement of reasons.	Met ☒ Partially met ☐ Not met ☐ The MDBA has met the obligation to prepare Basin annual environmental watering priorities in accordance with Basin Plan requirements. Please see: Basin Annual Environmental Watering Priorities | Murray–Darling Basin Authority (mdba.gov.au) The MDBA has reviewed the Basin-wide environmental watering strategy and will be publishing an updated version in early 2025. The review and update were undertaken in consultation with the Basin states and the CEWH via the Environmental Watering Committee and associated BWS working group. The obligation to prepare annual environmental watering priorities (i.e. those prepared by the Basin states) was met by all states bar ACT. Long-term watering plan updates were not required during this reporting period but may be following publication of the updated Basin-wide environmental watering strategy. Note: The delivery date for the updated Basin-wide environmental watering strategy is later than the anticipated date of November 2024.
Indicator 10.2 Watering strategies, plans and priorities are prepared consistently with Part 4 of Chapter 8, in relation to coordinating, consulting and cooperating with other reporters and the matters to which regard must be had (Chapter 8, Part 4) Applicable to: Chapter 8 Part 4	***Context:*** *Part 4 of Chapter 8 places obligations on the MDBA that relate to consultation, and other matters (including the Basin-wide watering strategy, consistency with international agreements, identification of possible cooperative arrangements) to which the MDBA must have regard to when annual watering priorities.* **Reporting requirement:** Confirm that watering strategies, plans and priorities are prepared consistently with Part 4 of Chapter 8, in relation to coordinating, consulting and cooperating with other reporters and the matters to which regard must be had. If unable to confirm, provide a statement of reasons.	Met ☒ Partially met ☐ Not met ☐ To prepare the 2023-24 Basin annual environmental watering priorities the MDBA consulted and coordinated with Basin States and the Commonwealth Environmental Water Office, through the Environmental Watering Committee and the Southern Connected Basin Environmental Watering Committee. The Basin annual environmental watering priorities were prepared consistently with legislative requirements. Please see: Basin Annual Environmental Watering Priorities | Murray–Darling Basin Authority (mdba.gov.au)
Indicator 10.3 Environmental watering in accordance with Basin annual watering priorities Applicable to: Basin Plan s8.44	***Context:*** *Section 8.44 of the Basin Plan requires reporting where annual environmental watering priorities are not followed. This includes providing the Authority a statement of reasons why environmental watering has not been undertaking in accordance with the priorities.* **Reporting requirement:** Confirm that environmental watering accordance with Basin annual environmental watering priorities. Where environmental watering was not in accordance with Basin annual environmental watering priorities. Provide a statement of reasons in accordance with Section 8.44 of the Basin Plan and Principle 1 of Division 6.	Met ☒ Partially met ☐ Not met ☐ The MDBA is not aware of any watering that was not done in accordance with the 2023-24 Basin annual environmental watering priorities.
Indicator 10.4 Demonstration of how the Basin Plan and/or the Environmental	**Optional reporting requirement:** Provide one or more examples that demonstrate how the Basin Plan and/or the Environmental Watering Plan (Chapter 8) has influenced environmental watering outcomes. If appropriate, the	**River Murray spring flow** In the River Murray, water for the environment was released to fill gaps between periods of higher unregulated flows

This	Supporting evidence to be provided by MDBA	Response
Watering Plan has influenced environmental watering outcomes.	examples may reference: a) the outcomes achieved b) how environmental watering principles were applied and identify the relevant principles c) environmental watering coordination and consultation process related to the Basin Plan d) challenges and opportunities e) how the 2020 Review of the Environmental Watering Plan (Chapter 8) is informing water planning and/or delivery, and the implementation of the Basin Plan	from July through to December 2023. This event occurs annually and represents the largest multi-site environmental watering event throughout the Murray-Darling Basin. Key principles of the Environmental Watering Plan are reflected in the planning and delivery of this annual event including coordination of environmental water alongside other water, a focus on maximising environmental benefits, managing risks, and adaptive management. The River Murray spring flow provides benefits along the length of the Murray River and its tributaries all the way downstream to the Coorong, Murray Mouth. This event supports many of the Basin Annual Environmental Watering Priorities, with monitoring and evaluation driving continued evolution in how the event is designed and delivered. Public reporting is provided in the SCBEWC annual report.
Indicator 10.4.1 Demonstration of how the Basin Plan has influenced outcomes for First Nations people, in relation to environmental watering.	**Optional reporting requirement:** Provide one or more examples that demonstrate: • First Nations people have been engaged in environmental watering activities in an appropriate and empowering way using free, prior, and informed consent. • Capacity to participate in planning and influence outcomes in water management has been built among First Nations people. • Outcomes desired by First Nations people have been achieved through environmental watering actions. • How the Basin Plan and/or the Environmental Watering Plan (Chapter 8), environmental water planning and/or delivery has contributed to the outcomes.	The MDBA are supporting a Murray-Darling Water and Environment Research Program (MD-WERP) initiative that is a co-developed native fish re-stocking project with the Victorian Fisheries Association and First Nations including First People of the Millewa and Mallee, Barapa Barapa and Wemba Wemba. The project has involved collaborative stakeholder meetings and on-Country tours to select three wetlands suitable for fish nurseries to host golden and silver perch fingerlings. Both western science and cultural knowledge will be used to plan and deliver water for the environment to care for the fish and aid their development until they reach maturity and can be released into nearby creeks and rivers. Additional stakeholders also involved include the Victorian Environmental Water Holder (VEWH) who are providing allocations of water for the environment; and Mallee and North Central Catchment Management Authorities who are providing additional project support. https://www.mdba.gov.au/news-and-events/newsroom/first-nations-knowledge-holders-scientists-working-together-native-fish The Living Murray Indigenous Partnership Program (coordinated by MDBA) has engaged First Nations people in environmental watering activities at TLM icon sites. For example, in 2023-24 the types of activities and projects this program has facilitated include: • Engagement activities: on-country workshops with First Nations to provide Cultural priorities into annual watering plans and Culturally significant activities e.g. Swan egg collection, field trips, talk water, yarning circles, and knowledge sharing on country. • First Nations involvement in monitoring activities: Projects included small-bodied threatened fish, turtle, scar tree health and tadpole monitoring, cultural heritage activities and Aboriginal Waterway Assessments.
Indicator 10.5 Reviews of the environmental watering plan Applicable to: Basin Plan s13.09	***Context:*** *The MDBA must conduct a review of the environmental watering plan every five years after the commencement of the Basin Plan.* **Reporting requirement:** Confirm that the MDBA has conducted a review of environmental watering plan every five year as per Basin Plan s13.09. If unable to confirm, provide a statement of reasons.	Met ☒ Partially met ☐ Not met ☐ The Environmental Watering Plan was reviewed in 2020. Please see: https://www.mdba.gov.au/sites/default/files/publications/review-of-environmental-watering-plan-march-20210.pdf. The next review of the Environmental Watering Plan is due in 2025.

Matter 13: The implementation, where necessary, of the emergency response process for critical human water needs.

Reporting Matter	Supporting evidence to be provided by MDBA	Response
The implementation, where necessary, of the emergency response process for critical human water needs.		
Matter 13.1 Status of Tier 1, 2 and 3 water sharing arrangements	**Reporting requirement:** Indicate which water sharing arrangements were in place for the reporting period, Tier 1, Tier 2, Tier 3.	**Status of Tier 1, 2 and 3 water sharing arrangements** Tier 1 ☒ Tier 2 ☐ Tier 3 ☐ Tier 1 water sharing arrangements were in place for the entire 2023-24 water accounting period.
Process for managing risks to critical human water needs associated with inflow prediction		
Matter 13.2 Assess the risks of insufficient conveyance water, insufficient water for the conveyance reserve, and the water quality and salinity triggers been reached. Determine whether any advances under the Murray-Darling Basin Agreement are required. Applicable to: Basin Plan s11.07	**Reporting requirement:** Confirm the MDBA has assessed and managed the risks to critical human water needs associated with inflow prediction in accordance with s11.07 and in conducting its river operations functions.	Met ☒ Partially met ☐ Not met ☐ To manage risks to critical human water needs associated with inflow prediction, the MDBA regularly reviews its predictions and adjusts to reflect current conditions. This is done through periodic review of the Annual Operating Outlook and the assumptions used in preparing the fortnightly Water Resource Assessments, in consultation with the Water Liaison Working Group. During all water resource assessments for 2023-24 and versions of the Annual Operating Outlook, sufficient water resources were available to meet the conveyance water, conveyance reserve and was of suitable water quality under all inflow scenarios.
Matter 13.3 Undertake inter-annual planning for critical human water needs. Applicable to: Basin Plan s11.08	**Reporting requirement:** Confirm the MDBA 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. • water resource assessments.	Met ☒ Partially met ☐ Not met ☐ The MDBA is required, under the Objectives and Outcomes for river operations in the River Murray System, to prepare water resource assessments monthly or at more frequent intervals approved by the Committee. Since the Millennium Drought, MDBA has been providing these assessments fortnightly for the majority of the water accounting periods to support the states in making their fortnightly allocation announcements. No reductions to the inflow statistics were warranted as inflows were not near minimums.
Matter 13.4 Determine if the trigger is reached and Tier 1 or 2 applies. Applicable to: Basin Plan s11.09	**Reporting requirement:** The MDBA, through the preparation of the Water Resource Assessment, will determine if the triggers detailed in s11.09 have been reached, or if the appropriate conditions apply. The MDBA will publish a notice on its website declaring that: • Tier 1 water sharing arrangements cease and Tier 2 water sharing arrangements commence;	Met ☒ Partially met ☐ Not met ☐ The MDBA undertook informal water resource assessments throughout the reporting period. At all times during these

Reporting Matter	Supporting evidence to be provided by MDBA	Response
	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.	assessments, there was sufficient water to meet the conveyance for 2023-24 and the conveyance reserve for 2024-25 with no forecasted periods of water quality that would trigger Tier 3.
Matter 13.5 Determine if the trigger is reached and Tier 3 applies. Applicable to: Basin Plan s11.15 and 11.16	**Reporting requirement:** The MDBA, through the preparation of the Water Resource Assessment will determine if the appropriate conditions apply. If appropriate, 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. 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.	Met ☒ Partially met ☐ Not met ☐ The MDBA has undertaken fortnightly water resource assessments and determined that Tier 1 water sharing arrangement were in place for the entire 2023-24 reporting period. The MDBA reports the status of the water sharing arrangements on the MDBA website, found here: https://www.mdba.gov.au/water-use/allocations/water-critical-human-needs.

Matter 14: The 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

Reporting Matter	Supporting evidence to be provided by MDBA	Response
Indicator 14.1 *Regard had to the targets in s9.14 when managing water flows* ***Indicator 14.2*** *Regard had to the targets in s9.14 when making decisions about the use of environmental water* *Applicable to:* *Basin Plan s9.14(1)*	***Context:*** *Basin Plan s9.14 recognises that flow management, in some circumstances, can assist with the management of water quality issues, such as salinity, hypoxic black water events and blue green algal outbreaks. The intent of s9.14 is that 'having regard' to these risks and opportunities becomes part of business as usual when making decisions about flow management or the use of environmental water. Other actions that can also address water quality issues include coordination and communication about blue green algal outbreaks (in line with Basin Plan s9.18) or hypoxic black water events.* ***Reporting requirement:*** *Describe how these water quality issues were considered, when making decisions about flow management or the use of environmental water, and/or other actions; did this make a difference to these water quality issues, and any learnings to inform continuous improvement.*	**Indicator 14.1** Met ☒ Partially met ☐ Not met ☐ MDBA River Operations continues to work in collaboration with relevant MDBA and state colleagues to coordinate and implement operational, mitigation or flow management actions that have regard for water quality, whenever possible. Decisions to implement these actions are also guided by monitoring and advice on water quality across the system, the need to balance state partner requirements, competing objectives, and the Objectives and Outcomes for Operating the River Murray. MDBA River Operations does not have direct powers to implement actions and release water for the sole purpose of improving water quality or meeting salinity targets. However, it can adjust operations under some circumstances and has regard to water quality when responding to specific water quality incidents and facilitating agreement to implement actions, including deliveries of environmental water, as shown in two examples from 2023-24: 1. The MDBA continued to review and adjust the combination of outlets used to release water in response to water quality conditions within Hume Reservoir that have been impacted by run-off from bush-fire affected catchments since the 2019-2020 summer bushfires. To mitigate downstream water quality degradation in the River Murray, varying proportions of Hume Dam releases that would typically come from the power station have been made via the irrigation valves and spillway gates, as necessary, to provide water aeration and access to different parts of the water column to help improve dissolved oxygen levels and manage concentrations of dissolved metals released into the river. The requirement to manage this issue is seasonally affected by the stratification and de-stratification of the water column meaning on-going water quality monitoring has been carried out to improve understanding of the issue, the effectiveness of the response and ensure actions are undertaken only when required. This has meant that releases prioritising the needs of power station generation have occurred - as much as possible - when water quality conditions have allowed. 2. In May 2024, the MDBA facilitated the commencement of a trial to connect environmental water from the northern to the southern Murray-Darling Basin. The initial phase of the trial was commenced at a time and in a manner that targeted improvements to water quality by providing a flush along the lower Darling River to help dilute and disperse high algal loads and stagnant water. The MDBA also coordinated a range of actions designed to further mitigate potential water quality impacts downstream including along the South Australian Murray. The connectivity trial has been agreed by BOC to continue until 30 June 2025 with future releases dependent on the volumes of Active Environmental Water that flows into the Menindee Lakes during the 2024-25 water year. The beneficial impact on water quality observed during the initial phase of the trial has led to the MDBA receiving positive feedback from community groups and stakeholders. **Indicator 14.2 Environmental water management** Met ☒ Partially met ☐ Not met ☐ The Southern Connected Basin Environmental Watering Committee (SCBEWC) has a risk management strategy to identify, evaluate and control risks associated with coordinating the delivery of environmental water. In the planning phase, environmental watering proposals are developed taking into account water quality risks and appropriate mitigation strategies. In many instances the watering proposals and risk mitigation are informed by dedicated modelling which simulates areas of inundation, water usage, impacts on downstream flows and water quality (including predicted downstream dissolved oxygen levels) associated with different flow delivery scenarios.

Reporting Matter	Supporting evidence to be provided by MDBA	Response
		During environmental water delivery, water quality is monitored via joint-funded water monitoring stations, supplemented with spot readings during watering actions at icon sites. Operational Advisory Groups comprised of key stakeholders support real-time management of environmental water delivery at the Icon Sites and within rivers with regular meetings during events to monitor outcomes and manage risks (including water quality). Post-event reviews and evaluation of monitoring results are then utilised in an adaptive management framework to inform the following years environmental water planning. In 2023-24 The Living Murray (TLM) environmental water portfolio (coordinated by MDBA) played a pivotal role in supporting ecological and water quality outcomes in the Baaka-Lower Darling. Over 80 GL of environmental water was delivered through the lower Baaka, to provide elevated baseflows providing improved habitat for large bodied native fish, supporting continue connection between the northern and southern Basin and supporting water quality outcomes by increasing dissolved oxygen levels.
Indicator 14.3 Monitor salinity levels at five sites on a daily basis and report at the end of each water accounting period.	***Context:*** *The MDBA monitors 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).* **Reporting requirement:** Provide links to reports where analysis of data at reporting sites against target values in s9.14(5) is available.	Met ☒ Partially met ☐ Not met ☐ Salinity levels at the five reporting sites (Lock 6, Morgan, Murray Bridge, Milang and Burtundy) were monitored continuously over the five-year reporting period (July 2019–June 2024). The targets are deemed to have been met if the percentage of days above the target is less than 5%, or the salinity has been below the target 95% of the time. Over the reporting period (July 2019–June 2024), the assessment indicates that the targets have been met at four of the five reporting sites – Lock 6, Morgan, Murray Bridge and Milang. The target for Burtundy is that salinity levels should not exceed 830 EC for 95% of time over the 5-year reporting period, and this was not achieved. At Burtundy, over the 5-year reporting period the target was exceeded for 8.5% of the time, with salinity levels peaking above 1,200 EC on several occasions during 2019 and again in 2024. The peak salinity level of 1,238 EC was recorded in early April 2024. The release of environmental water when available during this 5-year period had a positive impact on salinity levels. The target for Milang is that salinity levels should not exceed 1,000 EC for 95% of time over the 5-year reporting period, and this was achieved and aided by the benefit of unregulated flows which resulted in a substantial reduction of salinity levels and a significant export of salt from the Lower Lakes. Salinity levels at the Milang site were above the target value of 1,000 EC for 2.68% of the 5-year reporting period with a peak measurement of 1,223 EC in mid-June 2022 during a ‘reverse flow event’. Under regulated conditions, the Milang site can be influenced by reverse flows resulting from the Coorong estuary migrating through and over the barrages into Lake Alexandrina. Following this event, salinity levels remained below 600 EC for 2023-24, in part due to the floods of 2022–23 and further unregulated flows in 2023–24. The report ‘Assessment of the salt export objective and salinity targets for flow management for 2023-24’ will be available on the MDBA website when it is published later in 2024.

Reporting Matter	Supporting evidence to be provided by MDBA	Response
Indicator 14.4 Adequacy of flushing to provide salt export Applicable to: Basin Plan s9.09(4) & (5) & (6)	***Context:*** *the MDBA estimates the number of tonnes of salt exported from the River Murray System to the Southern Ocean.* **Reporting requirement:** Provide links to reports where the estimated number of tonnes of salt exported from the River Murray System to the Southern Ocean for the reporting period is available.	Met ☒ Partially met ☐ Not met ☐ Over the three-year period from July 2021 to June 2024, the annualised rate of salt export over the barrages was 2.63 million tonnes per year. This is greater than the indicative figure of 2 million tonnes per year referred to in the Basin Plan and was aided by the unregulated flow event in 2022-23. Flushing salt from the river systems helps avoid salt accumulation and adverse impacts on water users and supports healthy river and floodplain ecosystems. A range of factors can influence how much salt is exported each year. These factors include river regulation, irrigation diversions, deferral of South Australia's entitlement flow, environmental water delivery volumes, unregulated flows, changed land management practices including salt interception works, complex groundwater systems and the highly variable nature of the hydrological conditions in the Basin. Local conditions in the Coorong including barrage operations to allow for improved fish passage into Lake Alexandrina, in addition to the fishways, also factor into the ability to achieve the salt export objective. Generally, more salt is flushed out to the ocean during wet years and less salt is flushed out in dry years. The report 'Assessment of the salt export objective and salinity targets for flow management for 2023-24' will be available on the MDBA website when it is published later in 2024.
Indicator 14.5 Review of the water quality and salinity targets Applicable to: Basin Plan s13.08 & s13.22	***Context:*** *the MDBA must conduct a review of the water quality and salinity management plan targets (s13.08) and publish the report (s13.22).* **Reporting requirement:** Confirm that obligations under s13.08 and s13.22 have been met, partially met or not met. If unable to confirm, please provide a statement of reasons. Provide links to supporting information if appropriate.	Met ☒ Partially met ☐ Not met ☐ A review of the water quality and salinity management plan targets is underway in 2023-24 to inform the Basin Plan Evaluation and will be completed by 31 October 2024. This review will be published on the MDBA website in line with s13.22. A copy of the previous 2020 review can be found here: Water quality targets review | Murray–Darling Basin Authority (mdba.gov.au).

Matter 16: The implementation of water trading rules

Reporting Matter	Supporting evidence to be provided by MDBA	Response
Information and reporting requirements (ss12.40 - 12.51)		
Matter 16 Publish information about water access rights and trading rules. Applicable to: Basin Plan Chapter 12 Part 5	***Context:*** *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.*	Met ☒ Partially met ☐ Not met ☐ 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). Links to State and IIO Trading Rules are updated on advice from the Basin States and IIOs.
Matter 16 Make water announcements generally available. Applicable to: Basin Plan Chapter 12 Part 5	***Context:*** *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.*	Met ☒ Partially met ☐ Not met ☐ The MDBA ensures that water announcements are generally available by publishing media releases as well as putting the releases on the MDBA website. The MDBA continued to manage sensitive water market information consistent with its protocol (introduced 2014, reviewed in May 2018). All MDBA workers must sign an annual statement they have read, understood, and will comply with the protocol.