Information collection template for water year 2019-20

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The Victorian 2019–20 annual report to satisfy annual reporting obligations for:

- Basin Plan Schedule 12 responses (except Matter 9 – use of environmental water)
- Basin Plan Implementation Agreement (BPIA) self-assessment of compliance with implementation tasks

Reporting context

This template provides an information collection point that covers Basin State 2019-20 annual reporting obligations in relation to the Murray-Darling Basin Plan for:

- Basin Plan Schedule 12
- the Basin Plan Implementation Agreement (BPIA) compliance requirements

Note that: reporting for Schedule 12 Matter 9 (the identification and use of environmental water) is reported separately by Basin States, CEWH and the Authority; and reporting for Schedule 12 Matter 5 (the transition to long-term average sustainable diversion limits) is reported separately by the Department.

Matter 6: Local Knowledge & Solutions

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
M6 **The extent to which local knowledge and solutions inform the implementation of the Basin Plan.** [Chapter 6, 8 & 10]	Please describe the process and outcomes of local engagement contributing to key BP implementation activities in 2019-20 as follows: **M6a) Water Resource Plans:** • The engagement process and how local knowledge and views influenced the development of WRPs. • Any activities undertaken to increase Traditional Owners' capacity to participate in the development of WRPs, and improve engagement between water planners and Traditional Owners, in order to incorporate indigenous values and uses into WRPs (BP Ch10 Part 9).	**Water Resource Plans** The details of the process and outcomes of local engagement contributing to key Basin Plan implementation activities for the Wimmera-Mallee Water Resource Plan were reported for the 2017-2018 water year. Traditional Owner engagement outlined below for Victoria's North and Murray Water Resource Plan also informed the finalisation of the Wimmera-Mallee Water Resource Plan. Engagement on Victoria's North and Murray Water Resource Plan occurred over a three-year period and included: • Risk assessment informed by an advisory panel of external stakeholders and the internal DELWP working group. • Technical advisory group made up of key delivery partners and representative stakeholder groups was set up in September 2017 to inform and review content while the Water Resource Plan was being developed. • An internal DELWP working group was established made up of representatives from each policy area contributing to the development of the Victoria's North and Murray Comprehensive Report. • A Working Group for Water Quality Management Plan made up of representatives from delivery partners. • Extensive engagement with Traditional Owner groups described in further detail below. • Targeted stakeholder briefings held throughout the preparation of the Water Resource Plan and during public consultation with various interested groups. • Extensive public consultation upon release of the draft Victoria's North and Murray Comprehensive Report in January 2019 to provide information regarding the purpose of the Water Resource Plan and an opportunity for the community to provide feedback over an eight-week period, including eight public sessions and more than 15 targeted stakeholder meetings. The targeted stakeholder briefings and public consultation activities included: ○ The draft Victoria's North and Murray Comprehensive Report was open for public submissions from 23 January to 18 March 2019. The initial public consultation period was extended from six to eight weeks in response to feedback from the community and their request for more time to consider the Plan. ○ Eight open community consultation sessions were held over three weeks in February 2019, including in Shepparton, Yea, Mildura, Bendigo, Wangaratta, Kerang. Session attendees were contacted following the meeting with a summary of the issues discussed across all sessions. A Frequently Asked Questions document was circulated to session attendees and uploaded to the Engage Vic website. ○ Representatives from the Water Resource Plan team presented the draft Plan to Goulburn-Murray Water's Water Service Committees at meetings across northern Victoria, and targeted stakeholder meetings were held with community groups during the public consultation period. ○ 42 Submissions to Victoria's North and Murray Water Resource Plan were received via Engage Vic, email and mail. All non-confidential submissions were uploaded to the Engage Vic website. Appendix D to Victoria's North and Murray Comprehensive Report outlines the feedback from community and how that feedback was incorporated in the final Victoria's North and Murray Water Resource Plan. ○ Victoria received 11 contributions from Traditional Owner groups to be included in Chapter 8 of the Wimmera-Mallee Comprehensive Report and Chapter 11 of Victoria's North and Murray Comprehensive Report. Victoria also produced a standalone publication: Traditional Owner objectives and outcomes: compilation of contributions to Victoria's water resource plans. **Traditional Owner engagement** Traditional Owner engagement was a major focus during the development of Victoria's Water Resource Plans. Across Victoria's water resource plan areas, 14 Traditional Owner groups were invited to collaborate to ensure that Victoria's plans reflect their aspirations for water. DELWP worked with each Traditional Owner group to create an engagement approach tailored to meet the needs of each group. Traditional Owner groups developed and signed-off their own contributions, which were included in the Comprehensive Report of both water resource plans. Traditional Owner contributions are also available in a standalone publication titled "Traditional Owner objectives and outcomes: Compilation of contributions to Victoria's water resource plans". This document can be found at https://www.water.vic.gov.au/mdb/mdbp/water-resource-plans under the heading "Other Publications". The Traditional Owner contributions outline expectations held by Traditional Owners for water resource management, including preferred means of engagement, objectives and outcomes for water management, values and uses of water and key areas of interest for

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
		Traditional Owner groups. Post accreditation of the water resource plans, the protection of Aboriginal water values and uses will continue to be strengthened through the Victorian Aboriginal water policy in Water for Victoria. It directs an ongoing partnership approach between Traditional Owners and Victorian Government water managers to: • support Aboriginal participation in Victorian water planning and management frameworks through collaborative structures that address the rights and interests of Traditional Owners • increase capacity for shared benefits to realise Aboriginal water outcomes through working with Water Corporations, Catchment Management Authorities and VEWH • build capacity to increase Aboriginal participation in water management.

	M6b) Environmental watering:
	
	• Describe the engagement process and how local knowledge, views and solutions influenced the planning and delivery of environmental water and the outcomes. This includes how the following were considered:
	  ○ the views of local communities and persons materially affected by the management of environmental water (BP8.39)
	  ○ indigenous values (BP8.35).
		In 2019-20 stakeholders and the community were engaged to provide local knowledge, views and solutions to inform annual environmental watering priorities by catchment management authorities (CMAs) during the preparation of their seasonal watering proposals and throughout the year. These proposals form the basis of the Victorian Environmental Water Holder's (VEWH) annual seasonal watering plan, which sets the scope of potential environmental watering across Victoria for the water year.
		
		Outline of Victoria's approach
		
		Engagement occurred with a broad range of interested parties, including through established Environmental Water Advisory Groups (EWAGs) (which include local community representatives and staff of partner agencies), Traditional Owner (TO) groups, community groups, Committees of Management, and through direct engagement with interested individuals and private landholders. Information obtained through this engagement, such as observations, monitoring results and risk identification and management, is used to shape the implementation of environmental watering. In addition to this, VEWH engages regularly with statewide peak bodies and stakeholders, including, but not limited to, Environment Victoria, the Victorian Farmers Federation, the Federation of Victorian Traditional Owners Corporation, the Murray Lower Darling Rivers Indigenous Nations, the Field and Game Association, Victorian Fisheries Authority, VRFish (Victorian Recreational Fishing peak body) and the Game Management Authority.
		
		Victoria's CMAs have an established network of stakeholders from local communities and peak bodies that are engaged on a range of issues, including the development and implementation of regional waterway strategies, environmental water management plans and annual seasonal watering proposals. These networks have been established for many years and continue to be an effective mechanism to engage with local communities. In more recent years, as the environmental water portfolio has expanded, some CMAs established EWAGs through public advertisements, nominations and/or recommendations. Additional stakeholders have also been identified and engaged during the planning and delivery of environmental watering events, as required.
		
		Traditional Owner involvement in planning and delivering environmental flows
		
		In recognition of the cultural importance of water, caring for Country and their long standing traditional ecological knowledge, Traditional Owners in Victoria are increasingly working with waterway managers to plan for and deliver environmental flows.
		
		Examples of Traditional Owners involvement during 2019-20 to plan for environmental watering in 2020-21 include:
		
		• **Barapa Barapa Wamba Wemba Water for Country project:** During 2019-20 Barapa Barapa and Wamba Wemba Traditional Owners continued to work in partnership with North Central CMA to deliver the Water for Country project in Gunbower Forest. This project explores how Tradition Owners' cultural and spiritual values can be better represented in water management. Planning for environmental watering in 2020–21 included discussion of vegetation monitoring results, current forest condition and potential watering requirements with a field ecologist and a field visit to review the previous year's cultural objectives and outcomes and discuss potential new objectives. The VEWH's Seasonal Watering Plan 2020-21 incorporates the work of the Water for Country steering committee to describe some of the cultural values and uses of Gunbower Forest, as well as the Barapa Barapa cultural watering objectives informing environmental watering decisions at Gunbower Forest in 2020-21.
		• **Supporting restoration of significant Murray River floodplain sites:** Robertson Creek is located within the Mallee CMA region and has high cultural value to the First People of the Millewa Mallee. The area is in poor condition due to a lack of flooding, vegetation loss and wind erosion. The First People of the Millewa Mallee Aboriginal Corporation (FPMM) are undertaking a program of restoration and protection work at the site. Mallee CMA worked with FPMM to determine how environmental water could complement their protection and restoration objectives, and environmental watering was proposed by the CMA and then planned by the VEWH to be delivered under all scenarios except drought, to improve the canopy cover of black box trees and to regenerate understory vegetation along Robertson Creek. In turn, the improved vegetation health will provide wind protection to the landscape alongside Robertson Creek.
		
		Examples of Traditional Owners involvement in delivering environmental flows during 2019-20 include:
		
		• **Guttrum Forest (Murray floodplain):** The VEWH, North Central CMA and Barapa Barapa and Wamba Wemba Traditional Owners worked together during 2019-20 to deliver much needed water to wetlands in Guttrum Forest and monitor the outcomes. Reed Bed Swamp and Little Reed Bed Swamp are nestled low in Guttrum State Forest, on the Murray River near Koondrook. Environmental water managers and Traditional Owners have been increasingly worried that the wetland plants and large old red gum trees surrounding the wetlands were being stretched beyond their tolerances under persistently dry conditions. Barapa Barapa and Wamba Wemba Traditional Owners have been involved in all phases of the watering event, working alongside the North Central CMA to plan for, deliver and carry out monitoring. Environmental watering during October to November 2019 and subsequent rainfall in late January and early February resulted in significant germination and growth of mudflat plant species, including old man weed which is an important cultural outcome. The growth of these mudflat species helps protect wetland soils from wind erosion as they dry out over summer.
		• **Horseshoe Lagoon (Goulburn system):** The first delivery of environmental water to Horseshoe Lagoon in the Goulburn system was achieved through a partnership between the Taungurung Traditional Owners water knowledge group Baan Ganalina (Guardians of Water), the Goulburn Broken CMA, local land holders and other partners. Horseshoe Lagoon is a significant place for Taungurung women, and is also an important habitat for rare and threatened species such as pied cormorant, azure kingfisher and eastern great egret. A celebration was held to mark the historic occasion. All who were present were delighted to see first-hand the birds and other animals that returned to the site after environmental water was delivered.

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		• **Using Taungurung water entitlements to deliver environmental flows in the King River (Ovens system):** Taungurung Land and Waters Council's 39 ML of allocation in the Ovens system was released from Lake William Hovell as an environmental flow in partnership with North East CMA, Goulburn-Murray Water and the VEWH to provide additional water to the King River and assist in healing Country. The flow provided a small variation within the water level to inundate new habitat for instream biota (fish and macroinvertebrates), allowing them to move more freely and find new sources of food. • **The Ranch Billabong (Wimmera River system):** Wimmera CMA and Barengi Gadjin Land Council, on behalf of the Wotjobaluk people, worked in partnership during 2019-20 to provide a variety of Aboriginal environmental outcomes through two deliveries of environmental water at Ranch Billabong (October 2019 and June 2020). The watering event aimed to restore indigenous plant and animal habitats, control selected weed species and improve the site's amenity and suitability for gatherings and events, such as earth oven and bark canoe recreations. **Community involvement in planning environmental flows** Examples of community involvement in planning environmental flows: • **Environmental watering advisory groups (EWAGs):** Agencies, interest groups and community members were engaged through the Goulburn, Broken River, Campaspe, Loddon and Loddon-Murray Wetlands EWAGs and the Gunbower Community Reference Group to incorporate expertise and local knowledge into seasonal watering proposals and to inform environmental watering decisions. • **Lower Goulburn River flows study review:** During 2019-20 a review of the environmental flows study for the lower Goulburn River commenced (due for completion 2020-21). Flows studies are the precursor to Environmental Water Management Plans (EWMPs). They establish in detail the environmental objectives, flow functions and specific flow recommendations at an individual river reach level. Community members and representative of conservation and recreational fishing stakeholder groups participated in the project advisory group to provide local environmental knowledge and help establish environmental objectives for the system.
	M6c) Other Basin Plan implementation activities, namely SDL adjustment: Describe how local knowledge and solutions identified through engagement with local communities, including Aboriginal communities, impacted on the implementation of other key Basin Plan mechanisms or activities including the development and implementation of SDL adjustment measures. (Reporters may also choose to address any of their other engagement priorities, which may vary among jurisdictions). 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.	**SDL Works and Constraints** Victoria continued to negotiate constructively with the Commonwealth Government throughout 2019-20 to secure funding for Stage 1 pre-construction activities for the Constraints Measures Program. As funding has not been secured there was limited community engagement during 2019-20. Victoria provided a funding submission to the Commonwealth for Stage 1 (pre-construction) activities in November 2019. Central to this is a community co-design process through which the project will work with key stakeholders from Goulburn through to Yarrawonga to discuss issues and provide advice to the Minister for Water. Victoria is an active member on the multijurisdictional Constraints Measures Working Group and has attended when required. The group met sporadically throughout 2019-20 and did so largely to formalise status updates to the Ministerial Council about the implementation of the Constraints Measures Coordinating Workplan. Victoria and NSW also called for an Independent Expert Panel Review of Constraints Modelling, which was chaired by Mr Greg Wilson. The Panel, through a series of workshops, sought information from the MDBA, as well as NSW and Victorian government agencies that oversee river management, storage operation, emergency response and catchment management. The Panel was supported by technical advisors who are leaders in the fields of ecology, hydrology, river management and hydraulic and hydrologic modelling. A key finding of the Independent Panel was that the existing modelling for the constraints program was insufficient to provide relevant and accurate information: i) about the costs and benefits of relaxing the constraints; ii) required for meaningful engagement and participation in the decision-making processes related to delivering the required flows needed to achieve the environmental benefits sought; iii) to landholders, local government and infrastructure managers about the consequences of inundating land. Victoria's funding proposal aims to build a much stronger knowledge base and work closely with communities through a co-design process. The Victorian Murray Floodplain Restoration Project (VMFRP), which is made of nine environmental works-based supply measures, made significant progress during 2019-20. Project staff met with adjacent landowners and community throughout the year – although Covid-19 restrictions meant that face to face consultation and engagement opportunities were limited during the second half of the year. One clear message from community members was that project success is dependent on much more than just adding water. Investment in complementary measures to manage the impacts of pest plants and animals - including carp, pigs, rabbits and goats - on cultural heritage and environmental values within the sites and adjacent landowners is critical. Victoria will need to work with Basin governments to secure investment into these important measures. The project worked closely with Traditional Owners to advance preparation of Cultural Heritage Management Plans (CHMP) at eight of the nine sites. The project is now shifting the focus from CHMPs to engaging on broader Traditional Owner needs and aspirations. A revised Traditional Owner Engagement Framework is in development. It draws heavily on engagement advice provided by Traditional Owners as part of the development of Victoria's water resource plans. **62 GL of Efficiency Measures** Since 2019, Victoria has funded the development of feasibility studies and business cases for projects presented in the 2018 Northern Victoria Water Infrastructure Prospectus of off-farm projects which could contribute to the requirement of 62 GL of efficiency measures under the SDL adjustment with neutral or positive socio-economic outcomes. Victoria has provided advice to project proponents to ensure projects are developed in alignment with the agreed criteria. This includes consultation by proponents with the stakeholders that will be affected by the implementation of projects including but not limited to landowners, sporting and recreation groups, environment groups, traditional owners, local businesses, local government and state government agencies. Following pre-consultation with affected stakeholders, Goulburn Murray Water (GMW) submitted the GMW Water Efficiency Project to the Department of Environment, Land, Water and Planning for assessment against the agreed socio-economic criteria. In line with the socio-economic criteria agreed to by Ministerial council, the proposal was published for public comment on Engage Victoria in August 2020 and depending on Commonwealth funding will be completed by 2024. Victoria subsequently lodged the project for funding which will recover 16 GL. This project is in addition to the Mitiamo project which will recover 1 GL and be completed in 2021.

Matter 10: Environmental Watering

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
[Chapter 8, Part 4]	**M10d)** Provide at least one case study that demonstrates how environmental watering principles were embedded in the decision-making process and identify the relevant principles *[limit 500 w].*	**Southern spring flow** During winter-spring 2019 environmental water releases from Lake Hume and Lake Eildon were co-ordinated to deliver large spring flows in the Murray and Goulburn rivers and through six Living Murray icon sites including the Coorong and Lower Lakes in South Australia. The initial flow commenced in August 2019 and was timed to coincide with natural seasonal increases in river flow. Carefully watching weather events, waterway managers halted the flow when high rainfall in the Ovens and Kiewa catchments provided large natural flows to the Murray River. A second release of environmental water commenced in September 2019 and, through careful planning, storage managers and waterway managers were able to time the release to meet with a flow delivery in the Goulburn River. The key environmental watering principles embedded in the process are identified below. *Consistency with priorities and objectives* The delivery supported Basin Watering Strategy outcomes and annual water priorities, with a focus on: • River flows and connectivity through to the Lower Lakes, Coorong and Murray Mouth • Connecting river and floodplain habitats to improve environmental condition • Protection of core wetlands to maintain critical refuge habitat (vegetation) • Maintaining foraging and roosting habitat at refuge locations (waterbirds) • Protecting refuges and in-stream habitats, maintaining river connectivity and securing water supply to key populations (fish). *Maximising environmental benefits* • The delivery was a large-scale, multi-site event involving water held by multiple environmental water holders • VEWH consulted with Goulburn Broken CMA to ensure releases from Lake Eildon and Hume Reservoir were scheduled to meet site based environmental objectives in the Goulburn River and Barmah Forest as well as meeting broader environmental objectives throughout the Murray River • Use of return flows enabled benefits to be delivered at multiple Victorian sites and further downstream, into South Australia. *Risks* Potential risks of environmental watering in the Goulburn River and Barmah Forest were considered at a joint risk management workshop between delivery partners in March 2019. Broader risks were considered during SCBEWC planning meetings in March and April 2019. Specific risks and mitigation actions were as follows: • Risk of unauthorised inundation of private land was managed by reducing environmental water releases when heavy rain was forecast – this was done in consultation with the River Murray Operator • Risks of blackwater were managed by ensuring the delivery ceased before summer • Risk of triggering waterbird breeding that could not be supported with follow up watering was managed by closing some regulators in Barmah Forest in spring • Risk of environmental water deliveries being disrupted by operational deliveries or consumptive customers being affected by environmental deliveries was managed by co-ordination with RMO during the planning phase and throughout the watering event to allow e-water deliveries to be factored into other river operations. *Adaptive management* • Planning involved meticulous supply assessments including multiple portfolios and planned water delivery options under a range of climate scenarios. Watch points and triggers based on natural rainfall were used to determine which watering actions would be undertaken. *Working effectively with local communities* • Agencies, interest groups and community members were engaged through environmental watering advisory groups to incorporate expertise and local knowledge into seasonal watering proposals and to inform environmental watering decisions at sites that received water in Victoria through the coordinated multi-site watering.
	M10e) Please provide reasons for any environmental watering that was not in accordance with the Basin annual watering priorities listed at Attachment A (partially/fully), in accordance with Section 8.44 of the Basin Plan and Principle 1 of Division 6.	During December 2019 and June 2020 145 ML of water for the environment was used for pump maintenance at Hattah Lakes. The environmental water used was authorised by the VEWH in line with the *Seasonal Watering Plan 2018-19* and with the authority of the SCBEWC (TLM holdings were used).
	M10f) Confirmation that the management and delivery of planned and held environmental water was consistent with the Basin Plan, including the	The Basin Plan and *Water Act 2007* (Cth) refer to two types of environmental water: held and planned. Held environmental water in Victoria consists of water held by the Victorian Environmental Water Holder (VEWH) or Commonwealth Environmental Water Holder to be taken and used in the system for environmental purposes. Please refer to examples provided in M10d for how held environmental water was managed and delivered consistent with Basin Plan Principles to be applied to environmental watering.

	environmental watering plan's *Principles to be applied to environmental watering*. If confirming, please provide evidence and examples. If unable to confirm, please describe what actions are underway to enable confirmation in the future.	Planned environmental water (PEW) is water that is committed or preserved for the purpose of achieving an environmental outcome and cannot be taken for any other use. Under this definition, there is little PEW in Victoria, however there is 'shared benefit water' that is managed through water system management rules, or unallocated water. This includes passing flows not specified as having an environmental purpose; unregulated river diversion rules (local management plans or rules) that provide security for all users of the resource; or water remaining in the system after consumptive and environmental entitlements are taken out (referred to as 'above cap' water). This water may contribute to overall environmental condition or outcomes but may be taken for other uses such as stock and domestic use. No PEW has been identified in the Wimmera-Mallee water resource plan area (refer to accredited Wimmera-Mallee Water Resource Plan), and at present there are three types of PEW identified in northern Victoria (refer to accredited Victoria's North and Murray Water Resource Plan). These three types of PEW are: 1. water protected in the Upper Ovens River by the Upper Ovens River Water Supply Protection Area Management Plan; 2. minimum and maximum flows identified for environmental purposes in the Broken system under the Bulk Entitlement (Broken System-Goulburn-Murray Water) Conversion Order 2004; and 3. minimum and maximum flows identified for environmental purposes in the Ovens River under the Bulk Entitlement (Ovens System – Goulburn-Murray Water) Order 2004. This PEW is provided consistent with Basin Plan and principles in the Environmental Watering Plan (Chapter 8). The three specific instances of PEW and its associated rules and arrangements are explained in the Victoria's North and Murray Water Resource Plan. Environmental water objectives for these three instances will be included in the next long-term watering plan update. Engagement with the MDBA continued beyond the finalisation of Victoria's LTWPs as to the correct identification of water as PEW. This was finalised as a component of preparing Victoria's North and Murray Water Resource Plan. Please also refer to Victoria's 2019-20 *Water Act 2007* (Cth) Section 71 reporting on Matter 9 for further details and additional confirmation that both HEW and PEW was managed and delivered appropriately. Note also that Victoria met with MDBA in December 2019 to discuss Victoria's water resource reporting to MDBA's transitional period water take report for 2018-19, including specific discussion of HEW and PEW reporting. Although not required in 2019-20, Victoria's guidelines for CMA development of Environmental Water Management Plans (EWMPs, the asset-based plans underpinning Victoria's long-term watering plans) were reviewed and an update has been drafted by DELWP in consultation with the CMAs, VEWH and Traditional Owner groups. This update – among other improvements – guides consistency with the Basin Plan and the environmental watering plan's Principles to be applied to environmental watering when future EWMPs are developed or when future updates to existing EWMPs occur. For example, the update provides improved guidance on: • collaboration with Traditional Owners materially affected by the management of environmental water, to include them as partners and incorporate their local knowledge (Principle 7 Basin Plan s8.39); • adaptively updating the management recommendations (Principle 8 Basin Plan s8.40) based on knowledge developed in the additional monitoring and research since the original EWMP, and to improve alignment with updates to the Basin-wide environmental watering strategy. Victoria's North and Murray Water Resource Plan package to the Murray-Darling Basin Authority (the MDBA) under the *Water Act 2007* (Cth) was accredited in June 2020. Development of the water resource plans involved considerable work by DELWP, Catchment Management Authorities and other collaborators to embed environmental watering principles – e.g. please refer to Victoria's response M6a and M6b re Principle 7 (Basin Plan s8.39) on incorporation of local knowledge and indigenous values at both policy/planning and at operational/on-ground scales. Principle 8 (Basin Plan s8.40) on adaptive management has been applied in application of held environmental water as understanding is developed with the Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP) and the Wetlands Monitoring and Assessment Program (WetMAP) and associated research. For example, VEFMAPs monitoring and research in a network of tributaries of the Wimmera River system is studying the joint fish and vegetation responses to environmental water delivery, and working with the CMA guides their management of flows for better ecological outcomes for Southern Pygmy Perch abundance, as well as aquatic plant diversity. Victoria has had environmental water protections in place for more than a decade. In its 3 July 2019 Board communique, the MDBA formally announced that the environmental flow protections required under the Basin Plan (prerequisite policy measures), including those in Victoria, had been assessed as being 'in effect'. In 2019-20, these arrangements enabled environmental water holders to deliver approximately 660 gigalitres of water in Victoria that was re-used elsewhere for additional environmental benefit. All environmental water delivery in Victoria during 2019-20 was consistent with the Victorian water entitlement framework, and no interim measures were adopted.

Matter 13: Critical Human Water Needs

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
M13 **The implementation, where necessary, of the emergency response process for critical human water needs.** [Chapter 11] [*BPIA 26.1*]	*Context: The Guideline for the triggers and processes for changing water sharing Tiers provides guidance on how the MDBA and Basin States should communicate if the triggers are reached.* **M13a)** Please indicate if a water quality trigger (as per s11.05) was reached and if so, what action was taken.	In 2019-20, water quality and salinity levels in Victorian tributaries to the River Murray did not exceed the trigger levels, as per s11.05, that would require a Basin Officials Committee member to advise the MDBA.

Chapter 11] [*BPIA 27.1, 27.2, 28.1*]	*Context:* ***(i)*** *The MDBA will provide New South Wales, Victoria and South Australia with Water Resource Assessments, from which the States make decisions about allocations. Assessments will be provided at least monthly, and more frequently if conditions warrant.* *(ii) During periods of Tier 3 water sharing arrangements, the MDBA will provide the Ministerial Council with Water Resource Assessments, from which New South Wales, Victoria and South Australia make decisions about allocations when determining if water can be made available for uses other than critical human water. Assessments will be provided at least monthly, and more frequently if conditions warrant.* *(iii) A Basin State must have regard to advice from the Authority regarding the volume of water to be made available to it in a particular year, when making decisions about whether water is made available for uses other than meeting critical human water needs (s11.08(3)).* *(iv) 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 Guideline for triggers and processes for changing water sharing Tiers provides more information on how the MDBA will communicate a change in water sharing arrangements to the Basin States, CEWH and the Department.* **M13b)** Please indicate if a trigger was reached and what action was taken to implement water sharing arrangements.	Tier 3 water sharing arrangements were not triggered in 2019-20.

Matter 14: Water Quality and Salinity

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
M14 **Progress the implementation of 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.** [Chapter 9] [BPIA 21.1]	*Context: BP Ch9.14 recognises that flow management, in some circumstances, can assist with the management of water quality issues, such as salinity, hypoxic blackwater events and blue green algae 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 algae outbreaks (in line with BP s9.18) or hypoxic blackwater events.* **M14a)** In this context, please describe how these water quality issues were considered, when making decisions about flow management or the use of environmental water, and/or other actions; did this make a difference to these water quality issues, and	**Environmental watering** Three processes inform decisions about flows and the use of water for the environment to assist management of water quality, these are: long-term and annual environmental flows planning, risk management processes and authorising emergency watering actions to mitigate water quality risks. The processes are described under sub-headings below. *Long-term and annual planning* Victorian catchment management authorities (CMAs) in northern Victoria, in collaboration with local communities, aquatic ecologists and other agencies, have developed environmental flows studies, long-term environmental water management plans (EWMPs) and icon site operating plans to guide environmental watering activities at rivers, wetlands and floodplains. These plans outline site values, environmental objectives and flow objectives for the sites. Objectives and flows recommendations to manage water quality issues, such as salinity and hypoxic blackwater are established through this planning. On an annual basis, CMAs develop seasonal watering proposals that inform the VEWH's seasonal watering plan. The seasonal watering plan includes the proposed flows required to limit water quality issues in accordance with the recommendations of the EWMP. Water quality objectives were identified for planned flows in 11 of 17 systems that VEWH delivers water to within the Murray-Darling Basin. Watering actions to specifically address water quality objectives included: • Summer low flows and freshes to prevent excessive increases in salinity and water temperature and to prevent significant declines in dissolved oxygen concentration (e.g. Campaspe River, Loddon River, Gunbower Forest, lower Broken Creek).

	are there any learnings to inform adaptive management.	• Winter freshes or high flows to flush organic material from riverbanks or floodplains during cool seasons and reduce the likelihood that summer freshes or storm events would trigger a hypoxic blackwater event (e.g. Barmah Forest, Loddon River).
		
		Risk management
		
		In collaboration with its program partners, the VEWH has developed a risk management framework to support the partner agencies in managing shared risks associated with delivery of environmental flows. The framework describes how partners work together to manage risks associated with environmental watering and sets out a clear process for identifying and assessing risks, assigning accountability for mitigating, monitoring and reviewing the risks. Shared risk management workshops are held in the lead up to each environmental watering season. In February-March 2019 the VEWH coordinated four risk management workshops relevant to the Murray-Darling Basin in northern Victoria covering the north-central, north-east, Goulburn-Broken, Mallee and Wimmera CMA regions. The workshops were attended by relevant program partners such as water holders, water corporations, waterway managers and public land managers. The workshops provided an opportunity for partner agencies to collectively identify if, when and where the water quality risks may occur during 2019-20. CMAs incorporated relevant outcomes from these workshops into their seasonal watering proposals and delivery plans.
		
		Delivery risks relating to water quality (for example mobilising BGA blooms or causing low dissolved oxygen) were identified in risks assessments for the Murray, Goulburn, Campaspe, Broken and Loddon systems at the risk workshops held in February-March 2019. Risks and mitigation actions are reviewed by program partners in delivery plans or at operational advisory groups before deliveries take place. Some actions identified to mitigate risks in 2019-20 include:
		
		• Consider the likelihood of initiating BGA blooms in event planning and amend plans as required to manage risk.
		• Land managers implement a risk-based monitoring program during environmental watering events and where issues are identified, activate BGA response processes.
		• Where possible implement a full annual suite of flow components in river systems, including those designed to control build of organic matter (such as winter flushes).
		• Plan deliveries with consideration of expected high temperature periods.
		• Develop monitoring and response plans and reserve contingency volumes in delivery plans for dilution flows if dissolved oxygen concentrations drop to levels of concern.
		
		Authorising emergency watering actions to mitigate water quality risks.
		
		To be effective, decisions to use environmental water to mitigate a water quality threat often need to be made quickly. In 2019-20 the VEWH introduced an emergency environmental watering procedure to enable environmental water to be rapidly authorised for use in an unplanned delivery to prevent, mitigate or respond to an acute environmental threat, such as deteriorating water quality.
		
		Water Corporations
		
		Under s41(2) of the *Water Industry Act 1994* (Vic), the Minister for Water issues a Statement of Obligations (SOO), which specifies the obligations of water corporations in relation to the performance of their functions and exercise of their powers. The current SOO was updated by the Victorian Minister for Water on 20 December 2015. It applies to the water corporations operating in the state's share of the Murray-Darling Basin: https://www.water.vic.gov.au/__data/assets/pdf_file/0015/54330/Statement-of-Obligations-General.pdf
		
		Part 5 of the SOO requires Victorian water corporations to ensure that the risks associated with the functions they perform and the services they provide are identified, assessed, prioritised and managed. This includes the development of a specific emergency management plan for risks to water quality and discrete requirements for reporting on any blue green algae blooms impacting on water supply or delivery services.
		
		Goulburn-Murray Water (GMW) and Grampians Wimmera Mallee Water (GWMWater) are the Victorian water corporations responsible for storage operations and bulk water supply in Victoria's surface water resource plan areas. Note both GMW and GWMWater generally use the term blue-green algae (BGA) in operations instead of cyanobacteria.
		
		GMW Response (Northern Victoria and Victorian Murray Water Resource Plan Areas)
		
		GMW had regard to the **dissolved oxygen targets** of section 9.14(5)(a) by:
		
		• Maintaining the minimum flow provisions of the bulk entitlements for the Ovens, Broken, Goulburn, Campaspe and Loddon bulk entitlements
		• Contributing to the real-time and spot monitoring of dissolved oxygen concentrations at locations along the Victorian tributaries to the River Murray (e.g. Rice's Weir and Goulburn Weir)
		• Including dissolved oxygen concentration data in daily data used for operational planning
		• Distributing regular external reports on dissolved oxygen concentrations at strategic locations and issuing extra reports as data trended towards target levels
		• Participating in operations advisory groups for environmental watering events including the Barmah-Millewa Forest, Goulburn River, Campaspe River, Loddon River, Gunbower Forest and Hattah Lakes as appropriate
		• Maintaining the availability of the 30 gigalitre reserve in the Goulburn system for mitigation of poor water quality
		
		GMW had regard to the **recreational water quality targets** of section 9.14(5)(b) by:
		
		• Operating as the delegated Regional Coordinator for blue-green algae (BGA) management across northern Victorian water systems, including:
		  ○ Maintaining regional BGA management plans for northern Victorian water systems
		  ○ Participating in the NSW-convened Murray Regional Algal Coordinating Committee (MRACC)
		• Maintaining local BGA management plans for GMW-operated water storages and irrigation areas

		• Contributing to the monitoring of BGA concentrations at key locations in Victorian tributaries to the River Murray • Distributing regular external reports on BGA concentrations at strategic locations and issuing extra reports - including media releases for public information - as data trended towards target levels • Maintaining the availability of the 30 gigalitre reserve in the Goulburn system for mitigation of poor water quality GMW had regard to the **salinity targets** of section 9.14(5)(c) by: • Maintaining the minimum flow provisions of the bulk entitlements for the Ovens, Broken, Goulburn, Campaspe and Loddon bulk entitlements • Contributing to the real-time and spot measurement of salinity concentrations at locations along the Victorian tributaries to the River Murray (e.g. Rice's Weir and Goulburn Weir) • Including salinity concentration data in daily data used for operational planning • Participating in operations advisory groups for environmental watering events including the Barmah-Millewa Forest, Goulburn River, Campaspe River, Loddon River, Gunbower Forest and Hattah Lakes as appropriate • Maintaining the availability of the 30 gigalitre reserve in the Goulburn system for the mitigation of poor water quality GMW issued warnings for high BGA levels in: • Lake Eppalock in the Campaspe system • Nagambie Lakes in the Goulburn system • Rochester Irrigation Area in the Goulburn system • Channel systems No. 7, 8 & 9 in the Central Goulburn Irrigation Area • Loddon Valley Irrigation Area (Channel east of Loddon River) • The East Loddon Water District • Cairn Curran Reservoir and Tullaroop Reservoir in the Loddon system • Lake Mulwala / Yarrawonga Weir in the Murray system • Hepburns Lagoon in the Bullarook system • Torrumbarry Irrigation Area (No. 1, No. 2 and No. 4 Lagoons, Gum Lagoon) in the Murray system BGA levels in the River Murray **did not exceed guideline values for recreational use** in 2019-20 in GMW's Area of Operation. However, WaterNSW issued warnings for Hume Reservoir and the River Murray downstream of Yarrawonga Weir, from Corowa to Barmah, and from Barmah to Echuca. **GWMWater Response (Wimmera-Mallee (surface water) Resource Plan Area)** GWMWater had regard to **dissolved oxygen targets** of section 9.14(5)(a) by: • Ensuring that water quality remains a key objective and is properly considered within relevant storage management rules and operating plans so that water is fit for purpose for urban, industrial, stock and domestic and environmental use • Releasing Victorian Environmental Water Holder and Commonwealth Environmental Water authorised water to the Wimmera River and its tributaries in accordance with requests received from the Wimmera Catchment Management Authority • Contributing to waterway monitoring at various locations, including locations at which dissolved oxygen is continuously monitored • Recognising that it owns and operates a number of deep storages that may produce cold water and low dissolved oxygen impacts in downstream waterways. GWMWater had regard to the **recreational water quality targets** of section 9.14(5)(b) by: • Developing, reviewing and updating a range of procedures and policies that are used to detect, identify and deal with blue green algae within its water storages, including headworks storages • Undertaking regular water sampling to monitor for and detect BGA outbreaks • Operating as the delegated regional coordinator for blue green algae management • Distributing regular internal and external reports and information about blue green algae outbreaks including media releases and signage DELWP actively monitors real-time BGA incidents in Victorian water bodies and has developed a web-based portal to manage and coordinate such incidents.
[Chapter 9] [BPIA 23.1]	*Context: The MDBA, the BOC, and Basin States are to undertake any long-term salinity planning and management functions in accordance with the targets*	Victoria's fulfilment of planning and management functions for the targets in Appendix 1 of Schedule B have been reported through Victoria's Basin Salinity Management 2030 Strategy (BSM2030) Comprehensive Report for 2017-19 to the Murray-Darling Basin Authority (MDBA). This report was subject to the Independent Audit Group for Salinity (IAG) in November 2019. Report of the IAG for Salinity July 2017-June 2019 found that Victoria has been fully compliant with Schedule B of the Murray-Darling Basin Agreement.

	in Appendix 1 of Schedule B of the Murray-Darling Basin Agreement (including the Basin Salinity Management Strategy Operational Protocols). **M14b)** Please indicate how salinity (and other) water quality targets are being applied. *(Note that Basin States may refer to Basin Salinity Management 2030 Strategy reporting to meet this reporting requirement, in line with the Schedule 12 Reporting Guidelines).*	Victoria is currently preparing a Status Report on planning and management functions for 2019-20, which is scheduled to be submitted to MDBA in October 2020.

Matter 16: Water Trading

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
M16 The implementation of water trading rules. [Chapter 12] *[BPIA 29.1 – 31.1]*	**M16 a)** Provide website links to the publication of information regarding an Approval Authority's interest in a trade (s12.38 (2)). **M16b)** Provide documentation to support compliance with s12.37 (notice of disclosure) **M16c)** Describe how you have notified affected parties with the decision to restrict a trade and reasons for the restriction consistent with s12.39. **M16 d)** How has your State undertaken best endeavours to ensure water announcements have been made generally available? **M16 e)** Provide documentation that supports a compliance with s12.50 (water announcements to be made generally available).	Victoria consistently meets Basin Plan water trade obligations and worked constructively with the MDBA during 2019-20 to resolve the remaining area of uncertainty in regard to the application of 12.23 in Victoria. Victoria has continued to develop water markets to make trading easier and help irrigators to manage their water better while staying informed. **M16a) Publication of information regarding and Approval Authority's interest in a trade** In accordance with BP s12.38, the Victorian Water Register website provides publicly available reports on all approved trades where an approval authority has an interest in the trade. This information is available for all such trades conducted by each approval authority since 1 July 2014 (including water trades in 2019-20). Refer to: http://waterregister.vic.gov.au/water-trading/status-of-trading-applications (see section titled "Trades where the approval authority is also the buyer or seller"). **M16b) Compliance with s12.37 (notice of disclosure)** In Victoria, there are four water corporations that are approval authorities subject to Basin Plan (BP) water trading rules. These are Coliban Water, Goulburn-Murray Water (GMW), Grampians Wimmera Mallee Water (GWMW) and Lower Murray Water (LMW). Each water corporation implements different policies and procedures to ensure that relevant parties are notified of the interests of the approval authority prior to the trade being approved. Letters from each approval authority outlining the measures they have implemented to support compliance with BP s12.37 are attached to this document (**Attachments 1-4**). As outlined in the letters, Coliban Water and GWMW are only market participants in situations where the trade is initiated by their customers. In such situations, disclosure that the customer is dealing with the water corporation is embedded in the application process. GMW and LMW are market participants in a wider range of scenarios; to account for this, both water corporations have put in place additional measures to ensure functional separation between their decisions to trade and their trade approvals. These measures include use of a third party to broker any trades and a requirement that brokers must disclose when the water corporation is a party to or has an interest in any trade, prior to submission of the trade. **M16c) Notification of decision and reason to restrict trades** Pursuant to BP s12.39, the Victorian Water Register has an in-built system that issues automatic written notifications to trading parties that have had their trade applications refused. The Victorian Water Register generates letters that Victorian approval authorities send to applicants to notify them that the trade has been refused and the reason(s) for refusal. Victoria has implemented functionality through the Victorian Water Register to provide clear and consistent reasons for refusal in all trade notifications including email notifications from trades submitted online. These notifications provide information (where relevant) on all trading rules applicable to the refused trade and the specific trading rule that restricted any trade. This information also helps market participants to improve their understanding of trade rules in Victoria and between states. Since 2018-19 water market participants have had access to a 'Where can I trade?' visual tool (https://waterregister.vic.gov.au/TradingRules2019/) on the Victorian Water Register website that helps them to explore and understand the trading rules relevant to their trades, and the factors that influence available trade opportunity. This service can also be used by market participants to demonstrate how different trade rules applied their approved or refused trades. The Victorian Water Register also notifies processing officers at Victorian approval authorities of the specific trading rules that restrict any trade, so they can provide applicants with more specific information in their written notifications, or upon request. When an application is submitted online through the Broker Portal within the Victorian Water Register, an automated written notification of the outcome of the trade application is provided to the broker at the time. As part of the conditions of use of the Broker Portal, the broker is obliged to provide a copy of this notification to the applicant(s) by the next business day. **M16d) and e) Water announcements to be made generally available** In accordance with BP s.12.50, Victoria has procedures in place to ensure water announcements are made generally available. Allocation and carryover announcements in northern Victoria are made available on the Northern Victorian Resource Manager's (NVRM) website at http://nvrm.net.au. The Victorian Water Register website also provides live public reports on current allocation trade opportunities within trade limits at http://waterregister.vic.gov.au/water-trading/allocation-trading. The NVRM website publishes regular seasonal determination announcements, summary information on trade opportunities and limits, and links to the Victorian Water Register and MDBA websites for further information at http://nvrm.net.au/seasonal-determinations. Any announcements about changes to Victorian water trading rules are made generally available on the 'News' page of the Victorian Water Register website at http://waterregister.vic.gov.au/about/news.

		Since 2018-19, market participants also have access to a: • free mobile app called 'Water Market Watch' which provides instant access to the latest water allocation announcements, spill determinations, trade limits and market prices from the Victorian Water Register. This app can be customised to provide target alerts based on individual preferences. • a 'Where can I trade?' visual tool (https://waterregister.vic.gov.au/TradingRules2019/) on the Water Register website that helps water market participants to better understand and visualise trading limits and the available trade opportunities in northern Victoria, and to investigate the factors that influence available trade opportunity. Victorian water corporations and the Victorian Environmental Water Holder (VEWH) do participate in water trade, and each has protocols and procedures in place to ensure that a person who is aware of a relevant water announcement before it is generally available must not trade until that information is generally available. The Department of Environment, Land, Water and Planning does very little trade, and is further developing refined procedures and policies to strengthen existing business practices to mitigate risks associated with the disclosure and management of water announcements. The Murray-Darling Basin Plan water trading rules place obligations on government agencies, including environmental water holders, regarding the management of water market sensitive information (known as a 'water announcement' under the trading rules – see Chapter 12, Part 5, Division 5 of the Basin Plan). Under these rules, persons or organisations may be prevented from trading when they have knowledge of water market sensitive information before it is made public. Some of the decisions and actions the VEWH may take in relation to water allocation trade (including its administrative transfers) may be considered a 'water announcement' within the meaning of the Basin Plan trading rules. The rules allow that such information is not considered a water announcement if it is consistent with a publicly available trading strategy. This document forms the VEWH's trading strategy which is found here: https://www.vewh.vic.gov.au/news-and-publications/news/water-allocation-trading-strategy-2019-20. The VEWH also has trading business rules that ensure significant market impacts are avoided, through actions such as limiting the volume of water that can be traded in a single transaction and in a single week. The VEWH's Trade Strategy describes expected water availability and potential commercial and administrative trade opportunities for the coming year. The 2019-20 Trade Strategy was published on the VEWH website on 4 July 2019. The VEWH did not commercially trade water in 2019-20. This was in line with VEWH's 2019-20 Trade Strategy, which indicated that if required at all, any volumes purchased would likely be relatively small, and any volumes sold would be less likely under drier scenarios. In 2019, independent auditors, Marsden Jacobs, undertook an allocation trade review and found the VEWH has not impacted water market prices, transparently signals its trading intentions to market participants, and effectively avoids market distortion and adverse impacts on other parties. Relevant to water allocation trade decisions, the report published in July 2019 found that the VEWH: • has a clear and open way of signalling its trade intents and activities and gives enough detail to people taking part in water markets. • has effective processes to ease potential adverse impacts on other parties and avoid any distortion in water markets. These include only announcing specific trade intents and activities when they will definitely happen and using existing, well-functioning market methods as a silent participant in the markets. • participation in water markets does not have a big influence on market prices. These are largely affected by other market forces like climate conditions, water availability, commodity prices and annual cropping choices. A summary of the report findings and a link to the report is available at: https://vewh.vic.gov.au/watering-program/trading
Information and reporting requirements		
[Chapter 12.43, 12.46] *[BPIA 31.1]*	**M16f)** Has the Basin State made any changes to the water access rights displayed on the MDBA's Water Market products page? If so what documentation has been provided to the MDBA with the updated information as required under s12.43? **M16g)** Has the Basin State implemented any new trade rules that regulate the trade of tradable water access rights? If so have they provided these rules to the MDBA as required under s12.46?	There has been no change to any Victorian water access rights displayed on the MDBA's Water Market products page. As requested by the MDBA, Victoria provided the required information about water access rights in an iterative process during May and June 2014 (refer to BP s12.43 and s12.44). Victoria provided all required information about trading rules (BP s12.46) to the MDBA in a letter dated 9 July 2014. On 12 December 2019, new Victorian regulations came into effect to restrict water take and use from Victorian tagged allocation accounts when related allocation trade limits are reached. These new regulations clearly translate the intent of Basin Plan trading rules into the Victorian framework. Victoria notified the MDBA of this change by letter on 12 December 2019, the same day the restrictions took effect. The new regulations and related determination were made publicly available on the following Victorian Water Register, Victorian Legislation and Victoria Government Gazette webpages: • Frequently Asked Questions document and a copy of both the regulations and determination: https://waterregister.vic.gov.au/water-trading/trading-rules • Regulations: https://www.legislation.vic.gov.au/in-force/statutory-rules/water-taking-and-using-water-under-tagged-allocations-interim-regulations/001 • Determination: http://www.gazette.vic.gov.au/gazette/Gazettes2019/GG2019S516.pdf
[Chapter 12] *[BPIA 31.2]*	**M16h)** Has the Basin State sold water in the previous year? If so, did they notify the approval or registration authority of the price agreed for the trade?	Victorian water corporations and the Victorian Environmental Water Holder participate in water trade. As with all Victorian water trade applications, their applications require notification of the price (or value) on trade application forms, including the forms for water share and allocation trade applications. These forms are available on the Victorian Water Register and are cross linked to water corporation websites at: https://waterregister.vic.gov.au/about/forms-and-fees These prices for these trades are recorded in the Victorian Water Register and are used to support public price reporting for all individual trades on the Victorian Water Register website as well as summary information on median market prices.

Matter 19: Water Resource Plan Compliance

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
M19 **Compliance with water resource plans**	**M19a)** The MDBA will provide Matter 19 reporting questions directly to jurisdictions which had accredited WRPs prior to 1 July 2019 through a separate process.	*Matter 19 reporting not required in 19-20.

Other: SDL Adjustment & Constraints Management

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
[BPIA 14.2]	**Ob)** Describe progress in the further development of the Ministerial Council agreed package of constraints proposals, and in addressing issues identified in the phased assessment process. **Oc)** Describe progress towards the successful implementation of constraints measures by 2024, including coordinated cross-jurisdictional activities and community involvement, to enable flow rates of up to 80,000ML per day at the South Australian border.	Victoria had its Goulburn Constraints Measure business case confirmed by the Sustainable Diversion Limit Adjustment Mechanism's Adjustment Implementation Committee in November 2019. Confirmation is a pre-requisite to Phase 3 and a submission for Stage 1 funding. Victoria submitted a Stage 1 funding bid for the Victorian Constraints Measures Program (CMP) in November 2019 to undertake pre-construction activities, including community co-design. Victoria continues to negotiate in good faith with the Commonwealth Department of Agriculture, Water and the Environment to finalise the funding bid and as at 30 June 2020, had received two rounds of feedback. The funding bid was prepared with assistance from the NSW Department of Planning, Industry and Environment in relation to cross-jurisdictional elements of the program. The Victorian CMP includes the following: • Goulburn Constraint Measure (Victoria) – all activities • Hume to Yarrawonga Constraint Measure (Joint Victoria-NSW) – all Victorian-only activities, plus Victoria's share of joint activities • Yarrawonga to Wakool Constraint Measure (NSW) – all Victorian-only activities, plus Victoria's share of joint activities. At Ministerial Council (MinCo) in August 2019, the Victorian and NSW Water Ministers called for an Independent Expert Panel to review the existing modelling that is to be used as part of the CMP. The purpose of the review was to: i) understand how the projects can be delivered in a real-world context, ii) create transparency and iii) confirm ecological outcomes. The Panel, chaired by Greg Wilson, found that existing modelling is insufficient to provide relevant and accurate information: • about the costs and benefits of relaxing the constraints • required for meaningful engagement and participation in the decision-making processes related to delivering the required flows needed to achieve the environmental benefits sought • to landholders, local government and infrastructure managers about the consequences of inundating land. In December 2019, the Panel's report was tabled (for noting) at MinCo 25 and the Basin Officials Committee was asked to consider the report and provide advice on its recommendations to the next council meeting. The Panel's recommendations and findings were accepted at MinCo 26 in June 2020, where the Murray-Darling Basin Authority (MDBA) agreed to MinCo's request to prioritise modelling of climate change scenarios on the future frequency, nature and extent of inundation, including planned environmental flows and unplanned flows, for the River Murray, to ensure that project design takes into account potential climate change impacts, and that fit for purpose assets and easements are designed. Victoria also investigated the opportunities and risks associated with asset ownership and maintenance, reviewed potential regulatory approvals requirements and developed a co-design and community consultation framework so that the community has ownership of the projects once funding is approved.

Other: Water Resource Plans

Reporting Matter	Reporting Requirement (Supporting evidence to be provided by Basin States)	Response (response/milestone achievement/compliance status)
[BPIA 24.1]	*Context: Progress with the development of Water Resource Plans for accreditation is currently being reported by the MDBA, through quarterly jurisdictional reports* **Od)** This reporting is optional. Basin states may choose to comment on their progress where this differs, or is expected to differ, from the most recent MDBA quarterly report on WRP development.	**Response to BP/BPIA reporting requirement:** The accreditation of all Victoria's WRPs marks a key milestone for Victoria and represents valuable work undertaken in partnership with our agencies, communities and Traditional Owner groups. Victoria's Wimmera-Mallee Water Resource Plan was accredited by Federal Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management, the Hon. David Littleproud MP in September 2019 while Victoria's North and Murray Water Resource Plan was accredited by Federal Minister for Resources, Water and Northern Australia, the Hon. Keith Pitt MP in June 2020. These achievements highlight Victoria's commitment and dedication to implementing the Murray-Darling Basin Plan. Victoria now has two accredited water resource plans, covering Victoria's five water resource plan areas. Note that the accreditation decisions relate to the relevant water resource plan areas: **The Wimmera-Mallee Water Resource Plan** • Wimmera-Mallee (groundwater) water resource plan area (accredited 19 September 2019) • Wimmera-Mallee (surface water) water resource plan area (accredited 19 September 2019) **Victoria's North and Murray Water Resource Plan** • Northern Victoria water resource plan area (accredited 28 May 2020) • Victorian Murray water resource plan area (accredited 10 June 2020) • Goulburn-Murray water resource plan area (accredited 10 June 2020)

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

The table below provides a reference for exception-based reporting under BPs8.44. The table lists Basin annual environmental watering priorities for 2019-2020 and the relevant jurisdiction.

The priorities are set out as rolling, multi-year priority frameworks that cover each resource availability scenario. Basin annual environmental watering priorities are listed within these frameworks for each resource availability scenario. If conditions change across catchments within the year, the annual priorities also change. This allows environmental water managers to change strategy in response to changes in conditions in specific catchments. Further details of the priorities are located in the report 'Basin environmental watering priorities – Overview and technical summaries – June 2019 https://www.mdba.gov.au/publications/mdba-reports/basin-annual-environmental-watering-priorities

	FLOW: Rolling, multi-year priority	FLOW: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
1 (a	FLOW: Support lateral and longitudinal connectivity along river systems. (VERY DRY)	Coordinate environmental watering to increase longitudinal connectivity in connected catchments. Mitigate irreversible impacts associated with extended drought. Prevent dry spell durations exceeding refuge tolerances.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
1 (b	FLOW: Support lateral and longitudinal connectivity along river systems. (DRY)	Maintain natural cycles of wetting and drying. Where possible, maintain base flow volumes at 60% of natural levels. Provide replenishment flows to maintain habitat condition and regulate water quality, carbon and nutrients. Use works infrastructure to connect floodplain-wetland ecosystems and manage associated risks.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
1 (c	FLOW: Support lateral and longitudinal connectivity along river systems. (MODERATE)	Coordinate regulated releases with tributary flows (regulated and unregulated) to increase longitudinal connectivity in the Barwon–Darling and Murray rivers. Coordinate regulated releases with timing of tributary flow events to increase flow variability and the frequency of in-channel pulses and bankfull flow events. Extend the duration and magnitude of natural events to promote the movement of biota nutrients, sediments and salt.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
1 (d	FLOW: Support lateral and longitudinal connectivity along river systems. (WET)	Manage water in harmony with natural cues to maximise connectivity and flow variability to reinstate key elements of the flow regime. Provide flow regimes that allow opportunities for high ecological productivity. Supplement unregulated flow events to promote hydraulic diversity and facilitate natural geomorphic processes and groundwater replenishment.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
1 (e	FLOW: Support lateral and longitudinal connectivity along river systems. (VERY WET)	Maximise ecological responses by adaptively managing the recession of high-flow events. Maximise the export of sediments, pollutants and salt. Mitigate water quality impacts associated with natural flood events.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
	FLOW: Rolling, multi-year priority	FLOW: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
2 (a	FLOW: Support freshwater connectivity through the Lower Lakes, Coorong and Murray Mouth. (VERY DRY)	Where possible, mitigate adverse environmental impacts associated with extended dry and drought conditions through the following priorities. Assist the maintenance of Lower Lake levels above sea level (0m AHD). Support the maintenance of suitable estuarine conditions around the barrages by managing balance between lake levels and barrage outflows (supporting by additional freshwater inflows where possible). Manage water quality in the Lower Lakes with additional freshwater inflows, having regard to the Basin Plan salinity targets. Where possible, provide flows to Coorong to avoid water quality exceeding tolerances of listed or threatened species.	SA, CEWH, TLM
2 (b	FLOW: Support freshwater connectivity through the Lower Lakes, Coorong and Murray Mouth. (DRY)	Continuously connect the Lower Lakes, Coorong and Southern Ocean via the Murray Mouth. Coordinate the management of environmental water with barrage operation to apportion environmental water between sites above and below the barrages. Improve water quality in the Lower Lakes with additional freshwater inflows, having regard to the Basin Plan salinity targets. Assist the maintenance of Lower Lake levels above 0.4m. Manage estuarine conditions around the barrages and in the Coorong's North Lagoon. Facilitate migratory fish movement via barrage fishways.	SA, CEWH, TLM
2 (c	FLOW: Support freshwater connectivity through the Lower Lakes, Coorong and Murray Mouth. (MODERATE)	Continuously connect the Lower Lakes, Coorong and Southern Ocean via the Murray Mouth. Coordinate the management of environmental water with barrage operation to increase the resilience of end- of-basin ecosystems. Supplement barrage flow events to enhance salt export and maintain estuarine water quality in the Coorong's North Lagoon. Provide seasonal water level variability within the Lower Lakes, and cues for migratory fish movement via flows through the barrages.	SA, CEWH, TLM

2 (d	FLOW: Support freshwater connectivity through the Lower Lakes, Coorong and Murray Mouth. (WET)	Continuously connect the Lower Lakes, Coorong and Southern Ocean via the Murray Mouth. Supplement unregulated barrage flow events to export salt from the Murray–Darling Basin and scour sediments from the Murray Mouth. Assist the maintenance and variability of Lower Lake levels to maximise ecological productivity. Provide seasonal flow variability within the Lower Lakes, and cues for migratory fish movement via flows through the barrages. Where possible, coordinate additional barrage flows to provide a suitable salinity gradient between the North and South lagoons.	SA, CEWH, TLM
2 (e	FLOW: Support freshwater connectivity through the Lower Lakes, Coorong and Murray Mouth. (VERY WET)	Continuously connect the Lower Lakes, Coorong and Southern Ocean via the Murray Mouth. Increase barrage flow volumes to maximise salt export and the scouring of sediment from the Murray Mouth and provision of cues for migratory fish movement. Harmonise barrage releases to provide conditions conducive to high ecological productivity in the Coorong.	SA, CEWH, TLM
	VEGETATION: Rolling, multi-year priority	VEGETATION: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
3 (a	VEGETATION: Maintain the extent, improve the condition and promote recruitment of forests and woodlands. (VERY DRY)	Identify critical river red gum, black box and coolibah communities to maintain condition or where saplings require water to survive. Where possible, manage or deliver water to these areas. This priority is dependent on the target species and is more critical the longer the preceding dry spell.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
3 (b	VEGETATION: Maintain the extent, improve the condition and promote recruitment of forests and woodlands. (DRY)	Identify important river red gum, black box and coolibah communities to maintain condition or where saplings require water to survive. Where possible, manage or deliver water to these areas. This priority is dependent on the target species and the condition of new recruits and is more critical the longer the preceding dry spell.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
3 (c	VEGETATION: Maintain the extent, improve the condition and promote recruitment of forests and woodlands. (MODERATE)	Promote growth and improve condition of desirable river red gum, black box or coolibah recruitment, where possible, to ensure their survival. Target low lying river red gum, black box and coolibah communities adjacent to rivers where water can be delivered to promote growth and improve condition.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
3 (d	VEGETATION: Maintain the extent, improve the condition and promote recruitment of forests and woodlands. (WET)	Inundate in line with optimal duration, timing and depth to support desirable recruitment and improve condition of river red gum, black box and coolibah communities.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
3 (e	VEGETATION: Maintain the extent, improve the condition and promote recruitment of forests and woodlands. (VERY WET)	Support inundation in line with optimal duration, timing and depth, as required, to promote desirable recruitment and improve condition of river red gum, black box and coolibah communities.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
	VEGETATION: Rolling, multi-year priority	VEGETATION: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
4 (a	VEGETATION: Maintain the extent and improve the condition of lignum shrublands. (VERY DRY)	Where possible, limit any loss or decline in condition of lignum shrublands. This priority is more critical the longer the preceding dry spell. Where lignum shrublands have been inundated in recent years, they are likely to be in a reasonable condition to withstand a dry period.	Vic, NSW, SA, CEWH, TLM, Qld
4 (b	VEGETATION: Maintain the extent and improve the condition of lignum shrublands. (DRY)	Where possible, limit any loss or decline in condition of lignum shrublands. This priority is more critical the longer the preceding dry spell, Where lignum shrublands have been inundated in recent years, they are likely to be in a reasonable condition to withstand a dry period.	Vic, NSW, SA, CEWH, TLM, Qld
4 (c	VEGETATION: Maintain the extent and improve the condition and of lignum shrublands. (MODERATE)	Maintain the condition of lignum shrublands by providing inundation in line with the optimal duration, timing and depth. The necessity of this priority is more critical the longer the preceding dry spell. Where lignum shrublands have been inundated in previous years, they are likely to be in a reasonable condition to withstand a dry period.	Vic, NSW, SA, CEWH, TLM, Qld
4 (d	VEGETATION: Maintain the extent and improve the condition of lignum shrublands. (WET)	Improve the condition of lignum shrublands by providing inundation in line with the optimal duration, timing and depth. Where lignum shrublands have been inundated in previous years, they are likely to be in a reasonable condition to withstand a dry period. The necessity of this priority is more critical the longer the preceding dry spell.	Vic, NSW, SA, CEWH, TLM, Qld
4 (e	VEGETATION: Maintain the extent and improve the condition of lignum shrublands. (VERY WET)	Improve the condition of lignum shrublands by providing inundation in line with the optimal duration, timing and depth. Where lignum shrublands have been inundated in previous years, they are likely to be in a reasonable condition to withstand a dry period. The necessity of this priority is more critical the longer the preceding dry spell.	Vic, NSW, SA, CEWH, TLM, Qld

	VEGETATION: Rolling, multi-year priority	VEGETATION: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
5 (a	VEGETATION: Expand the extent and improve the condition of Moira grass in Barmah–Millewa Forest. (VERY DRY)	Where possible, limit any loss of Moira grass extent through the operation of forest regulators. The necessity of this action will become more critical the longer the preceding dry spell.	NSW, Vic, CEWH, TLM
5 (b	VEGETATION Expand the extent and improve the condition of Moira grass in Barmah–Millewa Forest. (DRY)	Maintain the condition and extent of Moira grass through the operation of forest regulators. Where possible, aim to improve condition of Moira grass. This action will be more likely in a Dry RAS following Moderate to Very Wet RAS years.	NSW, Vic, CEWH, TLM
5 (c	VEGETATION: Expand the extent and improve the condition of Moira grass in Barmah–Millewa Forest. (MODERATE)	Improve the condition and maintain the extent of Moira grass by providing an opportunity for growth of existing plants. Where possible, aim to increase Moira Grass extent by optimising the duration and depth of inundation.	NSW, Vic, CEWH, TLM
5 (d	VEGETATION: Expand the extent and improve the condition of Moira grass in Barmah–Millewa Forest. (WET)	Improve the condition and extent of Moira grass by providing inundation in line with optimal duration and timing. If a flowering event occurred in the previous water year, promote seed germination if/where possible. If seed germination occurred in the previous water year, support the consolidation of growth of new plants.	NSW, Vic, CEWH, TLM
5 (e	VEGETATION: Expand the extent and improve the condition of Moira grass in Barmah–Millewa Forest. (VERY WET)	Improve the condition and extent of Moira grass by providing inundation in line with optimal duration and timing. If a flowering event occurred in the previous water year, promote seed germination if/where possible. If seed germination occurred in the previous water year, support the consolidation of growth of new plants.	NSW, Vic, CEWH, TLM
	VEGETATION: Rolling, multi-year priority	VEGETATION: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
6 (a	VEGETATION: Expand the extent and improve resilience of *ruppia tuberosa* in the southern Coorong. (VERY DRY)	Where possible, limit loss of ruppia extent through the delivery of freshwater through barrages. Where possible, improve water quality to maintain ruppia habitat conditions and mitigate risks to population health. The necessity of this action will become more critical the longer the preceding dry spell.	SA, CEWH, TLM
6 (b	VEGETATION: Expand the extent and improve resilience of *ruppia tuberosa* in the southern Coorong. (DRY)	Maintain the extent of ruppia through the delivery of freshwater through barrages. Where possible, improve water quality to maintain ruppia habitat conditions and mitigate risks to population health. The necessity of this action will become more critical the longer the flows across the barrages are at lower volumes.	SA, CEWH, TLM
6 (c	VEGETATION: Expand the extent and improve resilience of *ruppia tuberosa* in the southern Coorong. (MODERATE)	Maintain the extent of ruppia by providing opportunities for growth and support the completion of the plant's life cycle. Where possible, promote ruppia sexual and asexual reproduction by providing inundation in line with optimal duration, timing and depth of flooding. Where possible, improve habitat conditions and salinity gradient in the Coorong to maintain ruppia condition and mitigate risks to population health. This includes considering options to manage the flow regime within the end-of-basin system to reduce the chance of filamentous algae outbreaks in the southern Coorong.	SA, CEWH, TLM
6 (d	VEGETATION: Expand the extent and improve resilience of *ruppia tuberosa* in the southern Coorong. (WET)	Improve the extent and support the reproduction of ruppia by providing inundation in line with optimal duration, timing and depth of flooding. This includes: • increasing inundation of mudflats over early spring • reaching peak inundation over late spring/early summer months • easing drawdown of water during mid-late summer. Where possible, operate barrages to enhance optimal ruppia inundation, including slowing the rate at which water levels drop over late spring and early summer. Improve habitat conditions and salinity gradient in the Coorong to maintain ruppia condition and mitigate risks to population health. This includes considering options to manage the flow regime within the end-of-basin system to reduce the chance of filamentous algae outbreaks in the southern Coorong.	SA, CEWH, TLM
6 (e	VEGETATION: Expand the extent and improve resilience of *ruppia tuberosa* in the southern Coorong. (VERY WET)	Improve the extent and support the reproduction of ruppia by providing inundation in line with optimal duration, timing and depth of flooding. Where possible, operate barrages to enhance optimal ruppia inundation, including slowing the rate at which water levels drop over late spring and early summer. Where possible, improve habitat conditions and salinity gradient in the Coorong to maintain ruppia condition and mitigate risks to population health. This includes considering options to manage the flow regime within the end-of-basin system to reduce the chance of filamentous algae outbreaks in the southern Coorong.	SA, CEWH, TLM
	WATERBIRDS: Rolling, multi-year priority	WATERBIRDS: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
7 (a	WATERBIRDS: Improve the abundance and maintain the diversity of the Basin's waterbird population. (VERY DRY)	Avoid loss of foraging and roosting habitat at refuge locations.	Vic, NSW, SA, CEWH, TLM

		Basin significant sites: Corop wetlands; Fivebough Swamp; Lowbidgee floodplain; Pyap Lagoon; River Murray & Euston Lakes; Upper Darling River.	
7 (b	WATERBIRDS: Improve the abundance and maintain the diversity of the Basin's waterbird population. (DRY)	Maintain foraging and roosting habitat at refuge locations. Support breeding where naturally triggered. Basin significant sites: Barmah–Millewa; Booligal wetlands; Lower Lakes, Coorong & Murray Mouth; Corop wetlands (refuge); Fivebough Swamp (refuge); Great Cumbung Swamp; Gunbower–Koondrook–Perricoota; Gwydir wetlands; Hattah Lakes; Kerang wetlands; Lake Brewster; Lowbidgee floodplain (refuge); Macquarie Marshes; Narran Lakes; Pyap Lagoon (refuge); River Murray & Euston Lakes (refuge); Upper Darling River (refuge).	Vic, NSW SA, CEWH, TLM
7 (c	WATERBIRDS: Improve the abundance and maintain the diversity of the Basin's waterbird population. (MODERATE)	Maintain waterbird breeding habitat in 'event ready' condition. Trigger and provide on-going support for small-scale breeding across functional groups. Support breeding where naturally triggered. Create mosaic of wetland habitats suitable for functional feeding groups. Basin significant sites: Barmah–Millewa; Booligal wetlands; Lower Lakes, Coorong & Murray Mouth; Corop wetlands; Great Cumbung Swamp; Gunbower–Koondrook– Perricoota; Gwydir wetlands; Hattah Lakes; Kerang wetlands; Lake Brewster; Lowbidgee floodplain; Macquarie Marshes; Narran Lakes; Pyap Lagoon.	Vic, NSW SA, CEWH, TLM
7 (d	WATERBIRDS: Improve the abundance and maintain the diversity of the Basin's waterbird population. (WET)	Support breeding where naturally triggered. Create mosaic of wetland habitats suitable for functional feeding groups. Trigger and provide on-going support for small to moderate-scale breeding across functional groups. Basin significant sites: Barmah–Millewa; Booligal wetlands; Lower Lakes, Coorong & Murray Mouth; Corop wetlands; Darling Anabranch; Fivebough Swamp; Great Cumbung Swamp; Gunbower-Koondrook-Perricoota; Gwydir wetlands; Hattah Lakes; Kerang wetlands; Lake Brewster; Lake Buloke; Lindsay-Walpolla-Chowilla; Lowbidgee floodplain; Macquarie Marshes; Narran Lakes; Pyap Lagoon; River Murray & Euston Lakes.	Vic, NSW SA, CEWH, TLM
7 (e	WATERBIRDS: Improve the abundance and maintain the diversity of the Basin's waterbird population.(VERY WET)	Support breeding where naturally triggered. Create mosaic of wetland habitats suitable for functional feeding groups. Improve the opportunities for large-scale breeding for colonial nesting waterbird species. Basin significant sites: Barmah–Millewa; Booligal wetlands; Lower Lakes, Coorong & Murray Mouth; Corop wetlands; Darling Anabranch; Fivebough Swamp; Great Cumbung Swamp; Gunbower–Koondrook–Perricoota; Gwydir wetlands; Hattah Lakes; Kerang wetlands; Lake Brewster; Lake Buloke; Lindsay–Walpolla–Chowilla; Lowbidgee floodplain; Macquarie Marshes; Narran Lakes; Pyap Lagoon; River Murray & Euston Lakes.	Vic, NSW SA, CEWH, TLM
	WATERBIRDS: Rolling, multi-year priority	WATERBIRDS: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
8 (a	WATERBIRDS: Maintain the abundance of key shorebird species in the Lower Lakes and Coorong. (VERY DRY)	Avoid loss of foraging and roosting habitat at key refuge locations. Where possible, manage algal blooms and water quality at key foraging sites.	SA, CEWH, TLM
8 (b	WATERBIRDS: Maintain the abundance of key migratory shorebird species in the Coorong and Lower Lakes. (DRY)	Maintain foraging and roosting habitat at refuge locations. Support breeding of resident shorebirds where naturally triggered (i.e. maintain isolation from predators). Manage algal blooms and water quality at key foraging sites.	SA, CEWH, TLM
8 (c	WATERBIRDS: Maintain the abundance of key shorebird species in the Lower Lakes and Coorong. (MODERATE)	Build productivity of foraging habitat for summer. Support breeding of resident shorebirds where naturally triggered (i.e. maintain isolation from predators). Manage algal blooms and water quality at key foraging sites.	SA, CEWH, TLM
8 (d	WATERBIRDS: Maintain the abundance of key shorebird species in the Lower Lakes and Coorong (WET)	Build productivity of foraging habitat for summer. Actively maximise shorebird access to foraging habitat during summer. Support breeding of resident shorebirds where naturally triggered (i.e. maintain isolation from predators). Create mosaic of wetland habitats suitable for shorebirds.	SA, CEWH, TLM
8 (e	WATERBIRDS: Maintain the abundance of key shorebird species in the Lower Lakes and Coorong. (VERY WET)	Where possible, actively maximise shorebird access to foraging habitat during summer. Support breeding of resident shorebirds where naturally triggered (i.e. maintain isolation from predators). Create a mosaic of wetland habitats suitable for shorebirds.	SA, CEWH, TLM
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction

9 (a	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (All SCENARIOS)	Support system-scale migrations of golden perch, silver perch and lamprey. Maintain the integrity of spawning flow pulses through the system to allow eggs and larvae to drift uninterrupted. Provide opportunities for young golden perch and silver perch to disperse following episodic system-scale recruitment vents. Increase flow connections between major rivers and their tributaries and anabranches to promote movement and dispersal. Provide flows that protect ecologically important populations of native fish.	NSW, Vic, SA, CEWH, TLM, ACT
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
9 (b	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (VERY DRY)	Provide base flows, low flows and small freshes. Maintain refuge waterholes to support key populations of native fish. Provide flows through barrage fishways in winter and spring.	NSW, Vic, SA, CEWH, TLM, ACT
9 (c	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (DRY)	Provide base flows, low flows and small freshes; and medium freshes with peak. Provide flows through barrage fishways all year round. Provide flows through barrages when possible.	NSW, Vic, SA, CEWH, TLM, ACT
9 (d	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (MODERATE)	Provide medium freshes with peak; large freshes; and hydrological connectivity between systems. Provide flows through barrage fishways all year round. Provide flows through barrages during spring.	NSW, Vic, SA, CEWH, TLM, ACT
9 (e	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (WET)	Provide medium freshes with peak; large freshes; and hydrological connectivity between systems. Provide flows through barrage fishways all year round. Provide flows through barrages through spring to autumn.	NSW, Vic, SA, CEWH, TLM, ACT
9 (f	NATIVE FISH: Support Basin-scale population recovery of native fish by reinstating flows that promote key ecological processes across local, regional and system scales in the southern connected Basin. (VERY WET)	Provide overbank flows (expected rather than targeted); and hydrological connection between systems. Provide flows through barrages year-round.	NSW, Vic, SA, CEWH, TLM, ACT
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
10 (a	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (ALL SCENARIOS)	Support system-scale migrations of golden perch, silver perch. Maintain the integrity of spawning flow pulses through the system to allow eggs and larvae to drift uninterrupted.	NSW, QLD, CEWH
		Provide opportunities for young golden perch and silver perch to disperse following episodic system-scale recruitment events. Increase flow connections between major rivers and their tributaries and anabranches to promote movement and dispersal.	
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
10 (b	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (VERY DRY)	Maintain refuge waterholes to support key populations of native fish. Provide base flows which support hydrological connectivity within systems and minimise cease-to-flow events.	NSW, QLD, CEWH
10 (c	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (DRY)	Provide flows that maintain existing populations. Provide base flows, low flows and small freshes which support hydrological connectivity within and between systems.	NSW, QLD, CEWH
10 (d	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (MODERATE)	Provide flows that support connectivity among populations and chances for fish to disperse. Provide small freshes and medium freshes,and support hydrological connectivity within and between systems.	NSW, QLD, CEWH
10 (e	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (WET)	Provide flows that assist in the broad-scale dispersal of fish across all life history stages into new habitats. Provide medium and large freshes and support hydrological connectivity within systems, between systems, and along the length of the Barwon−Darling and into the Menindee Lakes.	NSW, QLD, CEWH
10 (f	NATIVE FISH: Improve flow regimes and connectivity in northern Basin rivers to support native fish populations across local, regional and system scales. (VERY WET)	Provide flows that assist in the broad-scale dispersal of fish across all life history stages into new habitats. Protect overbank flows and support hydrological connection within and between systems, especially into the Menindee Lakes (to support the needs of the Lower Darling).	NSW, QLD, CEWH
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
11 (a	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new	Maintain the integrity of spawning flow pulses through the system to allow eggs and larvae to drift uninterrupted. Provide opportunities for	Vic, NSW, SA, CEWH, TLM, Qld, ACT

	populations. (ALL SCENARIOS)	young fish to disperse following recruitment events. Increase flow connections between major rivers and their tributaries and anabranches to promote movement and dispersal. Provide flows that protect ecologically important populations of native fish.	
	NATIVE FISH: Rolling, multi-year priority	NATIVE FISH: Basin annual environmental watering priorities 2019-2020	Relevant jurisdiction
11 (b	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new populations (VERY DRY)	Provide flows to protect critical populations of threatened small-bodied fish. Maintain refuge waterholes to support key populations of native fish. Provide base flows which support hydrological connectivity within systems and minimise cease-to-flow events.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
11 (c	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new populations (DRY)	Provide flows that protect existing populations of threatened small-bodied fish. Provide base flows, low flows and small freshes which support hydrological connectivity within and between systems.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
11 (d	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new populations (MODERATE)	Provide flows that expand existing populations of threatened small-bodied fish; and prepare new re-introduction sites. Provide medium freshes with peak; large freshes; and hydrological connectivity within and between systems.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
11 (e	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new populations (WET)	Provide flows that expand existing populations of threatened small-bodied fish; and create new re-introduction sites. Provide medium freshes with peak; large freshes; and hydrological connectivity within and between systems.	Vic, NSW, SA, CEWH, TLM, Qld, ACT
11 (f	NATIVE FISH: Support viable populations of threatened native fish, maximise opportunities for range expansion and establish new populations (VERY WET)	Provide flows that assist in the dispersal of threatened small-bodied fish into new habitats. Provide overbank flows (expected rather than targeted); and hydrological connection within and between systems.	Vic, NSW, SA, CEWH, TLM, Qld, ACT