



GOULBURN RIVER SEASONAL WATERING PROPOSAL 2026–2027



**GOULBURN
BROKEN**
CATCHMENT
MANAGEMENT
AUTHORITY

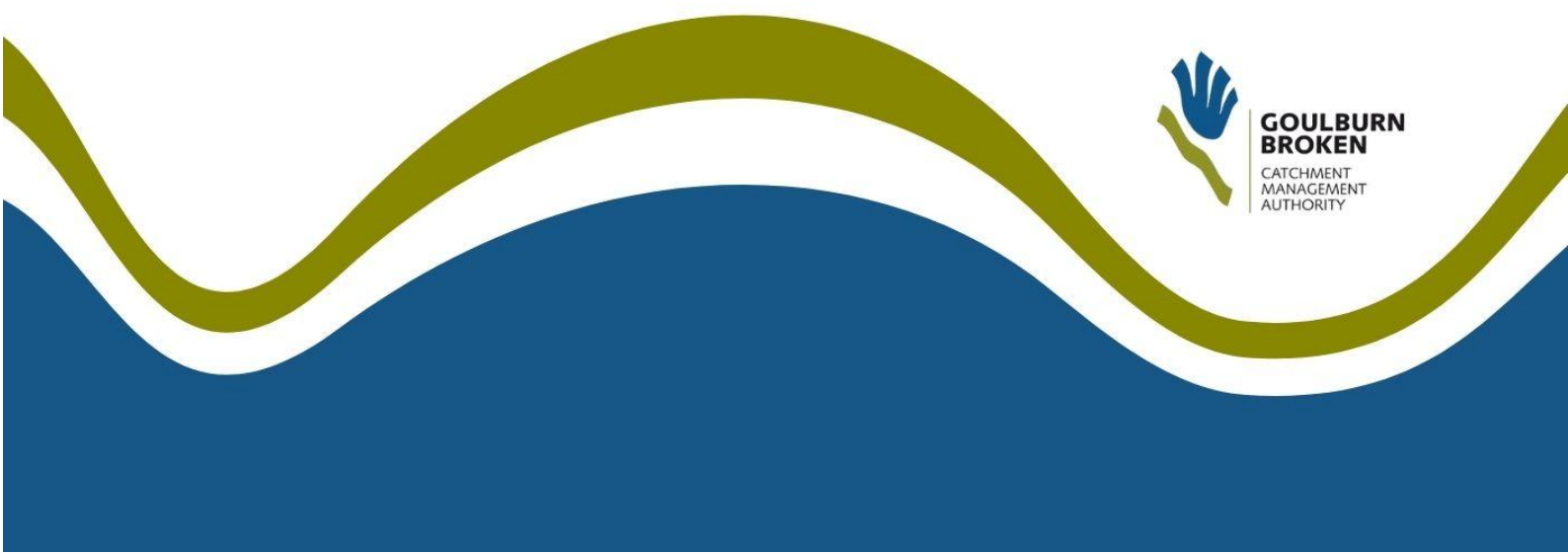


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Document Control

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1 CONTEXT

The Goulburn River Seasonal Watering Proposal outlines the Goulburn Broken Catchment Management Authority's priorities for the use of water in the Goulburn River in 2026-27 to protect and enhance the environmental values and health.

The purpose of this Goulburn River Seasonal Watering Proposal is to:

- identify the environmental water requirements of the Goulburn River in 2026-27 under a range of climate and consumptive water delivery scenarios; and
- inform the development of environmental water priorities in the VEWH's Seasonal Watering Plan.

The proposal is informed by current ecological conditions, scientific studies and reports that identify the flow regimes required to meet the ecological objectives of the Goulburn River.

2 SYSTEM OVERVIEW

Waterway manager – Goulburn Broken Catchment Management Authority

Storage manager – Goulburn-Murray Water

Environmental water holders – Victorian Environmental Water Holder (including the Living Murray program) and the Commonwealth Environmental Water Holder

Land Manager: Parks Victoria and Taungurung Land and Waters Council

Figure 1 showing proportions of water entitlements in the Goulburn basin held by private users, water corporations and environmental water holders on 30 June 2020.

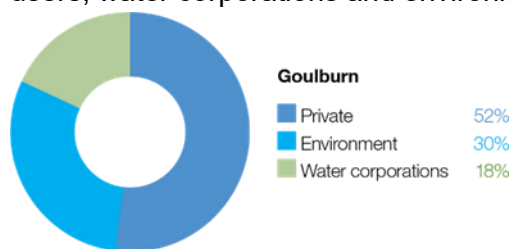


Figure 1: Water entitlements in the Goulburn system.

The Goulburn system includes the Goulburn River and Goulburn wetlands

The Goulburn is Victoria's largest river basin, covering over 1.6 million ha or 7.1 per cent of the state (Figure 2). The Goulburn River flows for 570 km from the Great Dividing Range upstream of Woods Point to the Murray River east of Echuca. It is an ancient, iconic river rich with environmental, cultural and recreational values.

There are several environmental water holders in the Goulburn system. The Commonwealth Environmental Water Holder (CEWH) holds the largest volume, and the use of Commonwealth Water Holdings is critical to achieving outcomes in the Goulburn River, as well as priority environmental sites further downstream. Water for the environment held on behalf of the Living Murray program may assist in meeting objectives in the Goulburn system en-route to icon sites in the Murray system. Water held by the VEWH in the Goulburn system is primarily used to meet environmental objectives in the Goulburn River and the Goulburn wetlands, but it can also be used to support environmental objectives at downstream sites along the Murray River and in South Australia.

The construction and operation of Lake Eildon and Goulburn Weir have significantly altered the natural flow regime of the Goulburn River. Water harvesting during wet periods and releases to meet irrigation and other consumptive demands during dry periods means the flow below these structures is typically low in winter/spring and high in summer/autumn. This is the reverse of the natural seasonal flow pattern. Land use changes and the construction of small dams and drainage schemes have further modified the Goulburn River's flow regime. Levees and other structures prevent water from inundating the floodplain and filling many of the natural wetlands and billabongs. Several tributaries, including the Acheron, Yea and Broken rivers, join the Goulburn River downstream of Lake Eildon and can add some flow variation to the river's regulated flows. Large floods that cause the Goulburn River's storages to fill and spill are also important for the overall flow regime and its associated environmental values.

The priority environmental flow reaches in the Goulburn River are:

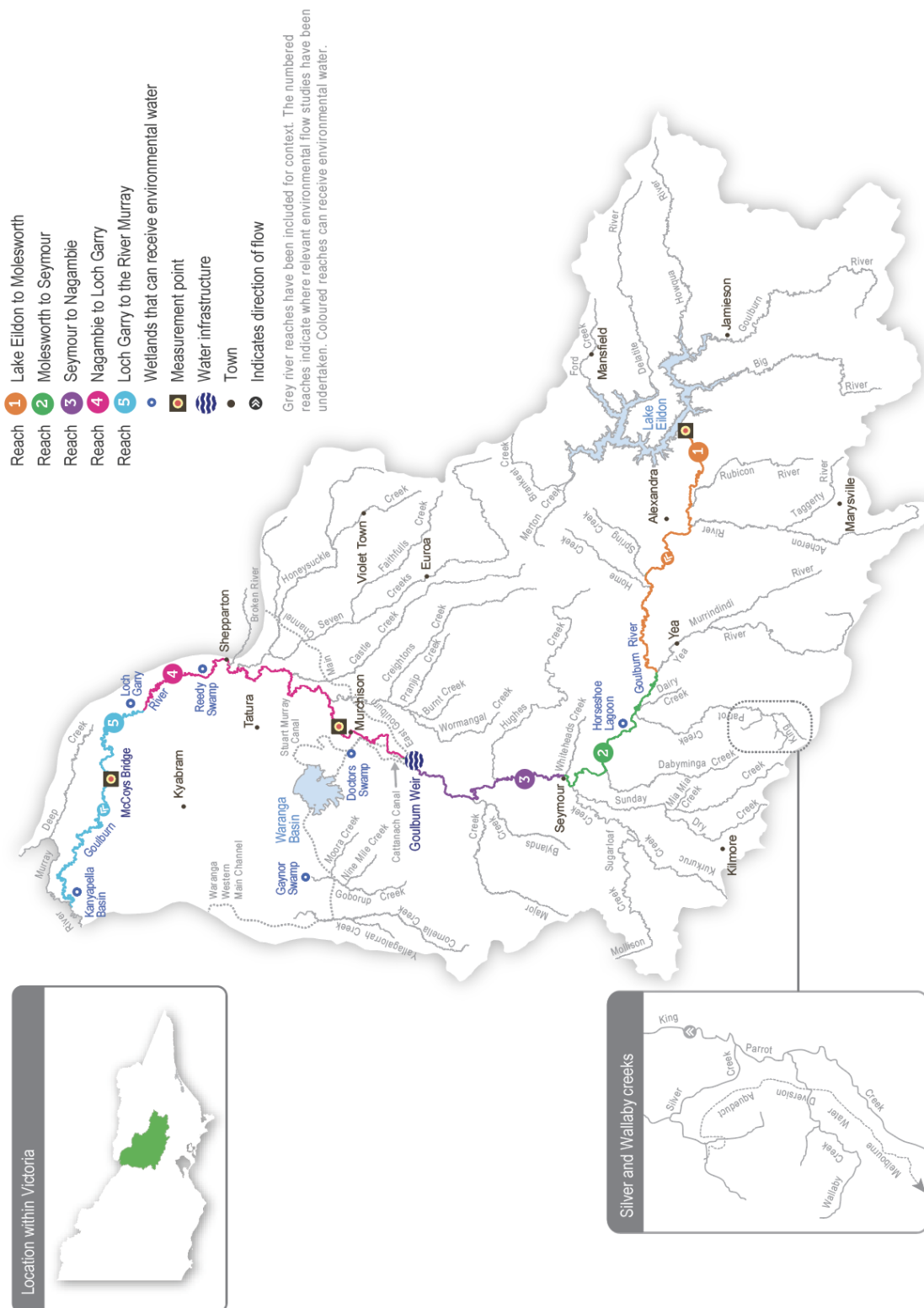
- Mid-Goulburn River (reaches 1 to 3) which extends from downstream of Lake Eildon to Goulburn Weir.
- Lower Goulburn River (reaches 4 and 5) starting downstream of Goulburn Weir to the Murray confluence (Figure 2).

From early spring to late autumn, large volumes of water are delivered from Lake Eildon to Goulburn Weir to supply the irrigation system. During that period, the flow in the mid-Goulburn River is usually well above the recommended environmental flow targets. Deliveries of water for the environment have the most benefit in the mid-Goulburn River (especially in reach 1 immediately downstream of Lake Eildon) outside the irrigation season when releases from Lake Eildon are often much lower than natural flows.

Environmental flow targets in the lower Goulburn River can sometimes be met by the coordinated delivery of operational water being transferred from Lake Eildon to the Murray River. These inter-valley transfers (IVTs) generally occur during the irrigation season between spring and autumn. IVTs in the Goulburn River can significantly exceed the environmental flow recommendations for summer and early autumn, historically damaging bank vegetation and eroding riverbanks. Goulburn to Murray operating rules were introduced in 2022-23 to reduce further damage to the lower Goulburn River from prolonged static high flows over summer and autumn.

Wet conditions between 2021-22 and 2023-24 resulted in low IVT demand with the small volumes of IVTs delivered mainly as base flows and small autumn pulse in 2024. 2024-25 was the first year a summer IVT pulse and multiple months of 1,100 ML/day average base flows was delivered since the introduction of the Goulburn to Murray trade rule. Dry conditions continued in 2025-26 and summer flows have been dominated by IVT deliveries including multiple IVT pulses. Widespread rain in late February and March has resulted in lower downstream demand and IVT was paused in early March before delivery of IVT in late April, including a pulse to meet Lake Ta-Ru filling targets. Environmental monitoring has been undertaken to assess the impact of the operating rules on the ecology of the lower Goulburn River.

Figure 2: The Goulburn system



3 ENVIRONMENTAL VALUES AND OBJECTIVES

The Goulburn River and its tributaries support a range of native fish (including golden perch, silver perch, Murray cod, trout cod, Macquarie perch and freshwater catfish), turtles, platypus and rakali (water rats). Aquatic vegetation, scour holes and woody debris within the channel provide high-quality habitat for adult and juvenile fish. River Red Gums are a dominant feature of the streamside zone along the length of the Goulburn River. These trees shade the river and provide habitat for many species, including the squirrel glider. Leaves that fall from the river red gums provide carbon that supports riverine food webs, and dead trees that fall into the river provide a surface for biofilms and waterbugs and habitat for fish. Birds (such as egrets, herons and cormorants) use trees along the river to roost and feed, while frogs benefit from shallow vegetated habitats at the edge of the river channel and in adjacent wetlands.

The Goulburn River system is an important conservation area for threatened species. Several wetlands in the Goulburn catchment are formally recognised for their conservation significance. Tributaries of the mid-Goulburn River between Lake Eildon and Goulburn Weir host some of the last remaining Macquarie perch populations in the Murray-Darling Basin, while freshwater catfish occur in lagoons connected to reach 3 of the Goulburn River. In 2025 catfish were reintroduced in small numbers at number of locations along the lower Goulburn River. eDNA monitoring has shown the presence of platypus populations along the length of the Goulburn River. Citizen science monitoring programs also indicate the mid Goulburn River supports a strong population of platypus, which are now classified as vulnerable under Victoria's *Fauna and Flora Guarantee Act 1988*. Monitoring in recent years shows that environmental flows in the lower Goulburn River trigger golden perch and silver perch to spawn. However, the extent to which these spawning events contribute to populations locally and in the wider southern basin is unknown. Self-sustaining populations of Murray cod have been confirmed, and Trout cod are extending their range in the lower Goulburn River.

The environmental objectives for the management of the key ecological values supported by the Goulburn River are summarised in Table 1.

Table 1: Goulburn River environmental objectives

Environmental objectives in the Goulburn River	
CN1 	Provide sufficient rates of carbon and nutrient production and processing to support native fish and waterbug communities
F1 	Increase the abundance, spatial distribution and size class diversity of key native fish species
G1 	Maintain natural channel form and dynamics to support ecological processes (e.g. sediment diversity, rates of sediment transport and bank erosion rates)
G2 	Increase instream physical habitat diversity by providing higher flows (velocities) to influence channel form (e.g. shallow and deep water habitats)
MI1 	Maintain abundant and diverse waterbug communities to support riverine food webs

 PR1	Increase the self-sustaining platypus population
 T1	Maintain the self-sustaining turtle population
 V1	Increase the abundance of aquatic and flood-tolerant plants in the river channel and on the lower banks to provide shelter and food for animals and stabilise the riverbank
 V2	Increase the abundance of aquatic and flood-tolerant plants in low-lying and connected wetlands
 WQ1	Provide higher flows to reduce water temperatures over summer, dilute small tributary hypoxic water events and nutrient runoff from human activities and thus minimise the risk of hypoxic water.

4 TRADITIONAL OWNER CULTURAL VALUES AND USES

The Goulburn River system flows through Taungurung Country and Yorta Yorta Country.

Each year, the Goulburn Broken CMA consults with the Taungurung Land and Waters Council (TLaWC) and the Yorta Yorta Nation Aboriginal Corporation (YYNAC) about plans for environmental watering in the Goulburn River. Consultation takes the form of formal and informal discussions.

TLaWC and YYNAC are members of the Goulburn Environmental Water Advisory Group and the Goulburn and Broken Operational Advisory Group. Both groups meet frequently throughout the year and share technical, operational and other information (such as recreational and cultural values) to support environmental water management and decision-making in the Goulburn River.

In 2023, the Goulburn Broken CMA met with the Taungurung water knowledge group Baan Ganalina (Guardians of Water) to discuss environmental flow recommendations for Waring (reaches 1 to 3 of the Goulburn River).

Baan Ganalina supports flows that would help to reinstate a more natural water regime that better reflects the size, timing and variability of natural inflows to this part of the river, including off-channel areas.

“These flow recommendations will help support Waring (Goulburn River), which is such an important part of Taungurung identity. It’s good to see how the Goulburn Broken CMA has used peer-reviewed articles to show the effects on important animals like platypus and shared this knowledge. The river is a work in progress, but together with the Goulburn Broken CMA, we will continue to seek ways to heal Country despite the harm it has suffered. Baan Ganalina hopes to see the proposed higher winter flows, and looks forward to taking an ongoing role in monitoring their effects.” - Baan Ganalina 2023

TLaWC communicated outcomes for *Waring* that align with Taungurung objectives and responsibilities to heal and care for Country, include connecting wetlands that support valued species at appropriate times. This helps to protect intangible and tangible cultural

heritage and values, including traditional food and medicine plants. Planned flows will also support ongoing efforts by Taungurung and program partners to care for the river and its floodplain, including investigations into rehabilitating degraded significant sites.

A Yorta Yorta Nation Aboriginal Corporation representative contributed to the 2020 [Kaiela \(Lower Goulburn\) Environmental Flows Study](#), which has influenced environmental flows in the lower Goulburn River since 2021-22.

Increasing the involvement of Traditional Owners in managing environmental flows and progressing opportunities towards self-determination in the environmental watering program is a core commitment of the VEWH and its program partners. This is reinforced by legislation and policy commitments, including the *Water Act 1989*, the [Victorian Aboriginal Affairs Framework](#), the 2016 [Water for Victoria](#), the 2022 [Water is Life: Traditional Owner Access to Water Roadmap](#), and, in some cases, agreements under the *Traditional Owner Settlement Act 2010*.

Both YYNAC and, Taungurung Land and Waters Council attend the Goulburn and Broken Operational Advisory Group and participate in multiple Goulburn River monitoring programs with scientists, which shares technical and operational information to support environmental water management and decision-making in the Goulburn River and lower Broken Creek.

Where Traditional Owners are more deeply involved in the planning and/or delivery of environmental flows for a particular site, their contribution is acknowledged in Table 3 with an icon (as explained below). The use of this icon is not intended to indicate that these activities are meeting all the needs of Traditional Owners but is used in the spirit of valuing that contribution.

	Watering planned and/or delivered in partnership with Traditional Owners to support cultural values and uses
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5 SOCIAL RECREATIONAL AND ECONOMIC VALUES AND USES

5.1 Part 1 – SRE values and uses:

In planning the potential watering actions in Table 3: Potential Watering Actions in 2026-27 Table 3, the Goulburn Broken CMA considered how environmental flows could benefit other values and uses such as:

- water-based recreation (such as boating, canoeing, fishing, gaming, hunting and kayaking)
- riverside recreation and amenity (for landholders and visitors)
- community events and tourism (such as paddling and boating businesses)
- socioeconomic benefits (such as improving water quality for stock and domestic uses, irrigation diverters and water supply for settlements on the Goulburn River).

Part 2 - how 2026-27 PWAs may support SRE values and used

Goulburn Broken CMA consider third party considerations when planning and delivering environmental water. Environmental flows may align with a social or recreational objective so long as environmental objectives are not compromised.

Where planned environmental flows may be modified to align with a community benefit, this is acknowledged in Table 3 with the following icons.

Table 2: Shared benefits to be supported by Potential Watering Actions in 2026-27

	Environmental watering will also support water sports activities (e.g., canoeing, kayaking, rowing, swimming, water skiing) so long as environmental outcomes are not compromised
	Environmental watering planned will support angling activities so long as environmental outcomes are not compromised
	Environmental watering will also support peaks in visitation (e.g., camping or other public activities on long weekends or school holidays) so long as environmental outcomes are not compromised

The Goulburn River provides numerous recreational and economic benefits. Environmental flows support native fish populations by providing fish passage and habitat and encouraging fish migration and spawning, which in turn benefits recreational anglers. Following community feedback, the timing of targeted environmental flow events in September (mid Goulburn) and November/December (lower Goulburn) where possible is planned to reduce impacts on river access around the opening of different fishing seasons, benefitting anglers and local businesses. Other high recreation periods are also taken into consideration when planning environmental flows.

6 SCOPE OF ENVIRONMENTAL WATERING

Environmental Watering Requirements outlined in this seasonal watering plan are developed based on a strong history of scientific studies and reports on the Goulburn River. Each year the environmental watering actions which have been developed in these reports are modified to reflect seasonal conditions and monitoring/observations from scientists and Goulburn Broken CMA staff. The potential watering actions for the mid and lower Goulburn River in 2026-27 are outlined in Table 3.

The Goulburn River Environmental Water Management Plan was completed in 2015 by the Goulburn Broken CMA (2015) and provides an overview of the long term environmental water management objectives and forms the basis of the environmental objectives for the Goulburn River unless these have been further refined by newer studies, technical investigations or ecological monitoring.

A number of environmental flows studies and technical reports from ongoing ecological monitoring have been undertaken for the Goulburn River. These are all listed in the references and include:

- Environmental Flow Recommendations for the Goulburn River below Lake Eildon (Cottingham et al., 2003)
- Evaluation of Summer Inter-Valley Water Transfers from the Goulburn River (Cottingham et al., 2007)
- Objectives for flow freshes in the lower Goulburn River 2010/11 (Cottingham et al., 2010)
- Mid Goulburn River FLOWS study (Cottingham et al., 2014a)
- Kaiela (Lower Goulburn River) Environmental flows study (University of Melbourne, 2020)

In 2018, some environmental flows objectives were reviewed as part of an investigation into IVT potential in the lower Goulburn River (Cottingham et al., 2018).

The Kaiela River (lower Goulburn) flows study (University of Melbourne, 2020) developed the latest suite of environmental flow recommendations using a slightly different method to the standard Victorian government method. The adopted method used a 'designer' flow approach and recognises that the Goulburn River is highly regulated and is no longer compatible with the 'natural flow paradigm' approach. Recommendations and ecological objectives from this report form the basis of environmental watering requirements for reaches 4 and 5 in this report.

Table 3: Potential Watering Actions in 2026-27

Potential environmental watering action	Expected watering effects	Environmental objectives
Mid Goulburn River – reaches 1-3 (Goulburn River downstream Lake Eildon 405204)		
Year round low flows Provide variable base flow of 400 - 2,000ML/day in reach 1 Variability pattern within channel bed to be informed by natural inflow pattern and operational practicalities	- Maintain habitat for small-bodied native fish - Maintain adequate foraging habitat for platypus and reduce the risk of predation - Provide habitat and food for turtles - Wet and maintain riffles to provide habitat for biofilms and waterbugs - Additional benefits to reach 1 of the Goulburn River when the flow delivered is above 800 ML/day: - scour fine sediment from the gravel bed and riffle substrate - maintain existing beds of in-channel vegetation - Provide connection to off-stream wetland habitats, which increase food resources (waterbugs) available for fish and native animals	F1 P1   MI1 T1   V1 G1    
Winter fresh Deliver the fresh peak flow of > 8,000 ML/day for 5 to 10 days between late July and August. Single flow rate held < 7 days. In conjunction with or 1-3 weeks after any lower Goulburn tributary dominated fresh.	- Encourage female platypus to select a nesting burrow higher up the bank to reduce the risk of greater flow later in the year flooding the burrow when juveniles are present - Scour sediment and increase velocities to maintain pools and affect river channel form change (increase complexity). - Connect low lying off-channel habitats enabling organic matter exchange, providing access to temperature refuge and supporting lentic (still water) specialists such as small bodied native fish. - Optimise foraging conditions for platypus and turtles. - Maintain existing beds of submerged vegetation both in-channel and in connected wetlands by reducing unsubmerged exposure time. - Increase habitat availability to support macroinvertebrate lifecycles	F1 T1   G1&G2 MI1   P1 V1& V2   
Spring fresh Deliver the fresh 8000 ML/day (but not exceeding winter fresh) for 5 to 10 days between September and November. Single flow rate held < 7 days. But 1-3 weeks after any lower Goulburn tributary dominated fresh.	- Scour sediment and increase velocities to maintain pools and affect river channel form change (increase complexity). - Provide natural seasonality to support macroinvertebrate lifecycles. - Connect low lying off-channel habitats enabling organic matter exchange, providing access to temperature refuge and supporting lentic (still water) specialists. - Optimise foraging conditions for platypus and turtles. - Maintain existing beds of submerged vegetation both in-channel and in connected wetlands by reducing unsubmerged exposure time. - Increase soil moisture in banks and connected wetlands to improve the condition of existing native vegetation	F1 T1   G1&G2 MI1   P1 V1& V2    
Variable autumn/winter/spring fresh(es) Up to 3 events per year greater than 5,000 ML/day for 5 to 10 days between May and November,	- Maintain physical instream features e.g. scour holes. - Provide natural seasonality to support macroinvertebrate lifecycles. - Connect low lying off-channel habitats enabling organic matter exchange, providing access to temperature refuge and supporting lentic (still water) specialists. - Optimise foraging conditions for platypus and turtles. - Maintain existing beds of submerged vegetation both in-channel and in connected wetlands	F1 T1   G1&G2 MI1   P1 V1& V2  

Aim to reflect natural inflow cues.		
Lower Goulburn River - reach 4 (Murchison 405200) and reach 5 (McCoys Bridge 405232)		
Year round low flows (500 - 1000 ML/day in reaches 4 and 5) Dependent on seasonal conditions. Provide a variable baseflow of 500 - 1000 ML/day in reaches four and five all year.	• Provide slow, shallow habitat required for the recruitment of larvae/ juvenile fish and habitat for adult small-bodied fish • Provide deep-water habitat for large-bodied fish • Provide habitat and food for turtles and platypus • Submerge snags and littoral vegetation to provide habitat for fish and waterbugs and a substrate for biofilms to grow • Maintain habitat for aquatic vegetation and water the root zone of low- bank vegetation • Vary flow within a specified range to encourage planktonic production (for food), disrupt biofilms and maintain water quality • Low variable flows enable vegetation to establish to protect against notching and bank erosion	CN1 F1 MI1 T1 V1 WQ1 P1 
Early spring fresh Deliver a fresh up to a peak flow of 10,000 ML/day (>7,300 ML/day for 7 days) between September and October. The magnitude of the fresh will be dependent on the proportion of natural flow and only exceed 9,500 ML/day if it is from natural flows. The spring fresh is the highest priority of freshes.	• Provide connectivity to off channel habitats and through the river for fish dispersal and greater food resources • Improve macroinvertebrate habitat by scouring fine sediments. • Provide cues for fish movement and dispersal • Provide organic matter and carbon (e.g. leaf litter) to the channel • Increase moisture in bank soils and provide a source of propagules driving establishment of new plants and growth of existing ones. • Remove terrestrial vegetation, scour and transport fine sediments to maintain pools and bring in sediments to maintain instream complexity	CN1 F1 G1&G2 MI1 V1& V2     
Late Autumn/Winter fresh Provide a fresh up to 10,000 ML/day (or high as possible) between May - August. Minimum peak flow of 7,300 ML/day for 4 to 5 days Aim to use a natural fresh and provide most of the event from rainfall runoff and minimal releases from Lake Eildon	• Provide connectivity to off channel habitats and through the river for fish dispersal and greater food resources • Trigger lamprey migration in South Australia if delivered to the Lower Lakes during July and/or August. • Channel forming events scour bed sediments to maintain and maintain pools and change in-channel complexity • Provide cues for platypus to nest higher up the bank so they are not impacted by the spring fresh. • Provide organic matter and carbon (e.g. leaf litter) to the channel • Tributary and high flows are a source of sediment and propagules driving establishment of new plants. • Remove terrestrial vegetation and trigger the recruitment of semi-aquatic vegetation • Improve macroinvertebrate habitat by scouring fine sediments, improving habitat area and food availability	CN1 F1 G1&G2 MI1 P1 V1& V2      
Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability A standing order will be placed with GMW to deliver recession flows and hypoxic water	• Minimise the risk of bank erosion associated with mass failure from rapid drops in river levels • Minimise the risk of hypoxic water after natural events • Reduce the risk of poor water quality harming aquatic biota • Transport and deposit seed, plant propagules and sediment on the riverbank • Provide organic matter and carbon (e.g. leaf litter) to the channel	CN1 F1 G1 MI1 V1 WQ1      

dilution flows up to 6,000 ML/day. In addition to opportunities to pass mid-Goulburn tributary flows and freshes.		
Autumn fresh Provide an autumn fresh (>5,700 ML/day for 1 to 7 days) between March and May	- Cue fish to move through the system allowing dispersal. Attract Golden and Silver perch to migrate into the Goulburn - Reinvigorate drying vegetation on the banks and provide some growth before the weather cools - Flush fine sediment and scour old biofilm from hard substrates to allow new biofilm growth and to improve food and habitat for macroinvertebrates - Scour and remove fine sediments to maintain instream habitat complexity	F1  G1  MI1  V1  
Late spring fresh Provide a fresh for fish spawning of short duration (>6,600 ML/day for 2 days and >1,500 ML/day for around 14 days) between October and December	- Stimulate spawning of Golden and/or Silver perch - Scour bed sediments to maintain pools and change in-channel complexity for improved habitat - Improve waterbug habitat and food availability by scouring fine sediments and biofilms from hard substrates	F1  G1  MI1  

7 SCENARIO PLANNING

Part 1 – expected conditions and prioritisation:

Bureau of Meteorology outlook indicates that the Goulburn and Broken catchment is likely to be drier and warmer than average from May to July. The long term climate outlook for environmental water planning is difficult to determine. Consequently, the CMA uses seasonal determination outlook scenarios provided by Goulburn-Murray Water (GMW) to assist in scenario planning. Table 4 shows the outlook (based on historic river flows and inflows) into Goulburn storages that has been used as a basis for scenario planning in this Seasonal Watering Proposal. This seasonal determination is the lowest outlook since 2019-20 with only 13% forecast under an extreme dry scenario

Lake Eildon is currently 41% full compared to the same time in 2025 when Lake Eildon was 62% full. Multiple years of dry inflow conditions mean that early season allocations will be low under the drier inflow conditions. Estimates are that there will be approximately 170 GL of water available from allocation for carried over from 2025-26 (subject to use for rest of the season).

Table 4: Goulburn system outlook for 2026-27 seasonal determination of high reliability shares

Inflow Conditions	1 July 2026	17 August 2026	15 October 2026	15 February 2027
Wet	40%	81%	100%	100%
Average	12%	41%	78%	100%
Dry	0%	16%	35%	45%
Extreme Dry	0%	1%	8%	13%

Source: GMW, 16 February 2026

Delivery of Water for the Environment in the Goulburn River is complicated with operational water deliveries combined with Inter Valley Water Transfers to the Murray all affecting the flow regime and benefits/use of environmental water. Predicted volumes of environmental water use in Table 5 have taken into account likely volumes of operational and IVT deliveries. If the assumed volumes and timing of IVT delivery do not occur it may be difficult to deliver all of the environmental watering actions e.g. the late spring fresh. The high-level scenario planning table focusing on use of water for the environment under the different inflow scenarios for 2026-27 is outlined in Table 5. A detailed scenario table, which builds on seasonal watering priorities and considers potential implications of all water sources is provided in Appendix 1.

Table 5: Scenario Planning in 2026-27

Planning Scenario	Extreme Dry (99% POE)	Dry (90% POE)	Average (50% POE)	Wet (10% POE)
Expected conditions	- No unregulated flow - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months. - IVT to be delivered at maximum rates under the Goulburn Operating arrangements	- One or two small, short duration freshes in winter/spring (perhaps up to 5,000 ML/day) and reasonable baseflows for half a month - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months - IVT to be delivered at maximum rates under the Goulburn Operating rules	- Potential spills through Goulburn Weir with one to three freshes (3,000 to 20,000 ML/day) and reasonable baseflows for most of the year likely flow targets will be provided for winter and spring by unregulated flow - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months - Not all IVT will be delivered but unregulated flows would meet baseflow targets for long durations through winter and spring.	- Overbank flows - Unregulated flow to provide the majority of flow over winter and spring and potentially into summer - Not all IVT will be delivered but unregulated flows would cover baseflow needs. - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months.
Expected availability of Water for the environment*	• 173 GL	304 GL	528 GL	528 GL
Goulburn River Reaches 1 to 3				
Potential environmental watering – Tier 1 (high priorities)	- Year-round low flow - Spring fresh	- Year-round low flow - Spring fresh	- Year-round low flow - Winter fresh - Variable autumn/winter/spring freshes (1-3) - Spring fresh	- Year-round low flow - Winter fresh - Variable autumn/winter/spring freshes (1-3)) - Spring fresh
Potential environmental watering – Tier 2 (additional priorities)	Winter fresh	Winter fresh	N/A	N/A
Goulburn River Reaches 4 and 5				
Potential environmental watering – Tier 1 (high priorities)	- Year-round low flow - Ecological risk mitigation flows - Early spring fresh - Late spring fresh	- Year-round low flow - Ecological risk mitigation flows - Early spring fresh - Late spring fresh	- Year-round low flow - Ecological risk mitigation flows - Late autumn/winter fresh - Early spring fresh - Late spring fresh - Autumn fresh	- Year-round low flow - Ecological risk mitigation flow - Late autumn/winter fresh - Early spring fresh - Late spring fresh

Planning Scenario	Extreme Dry (99% POE)	Dry (90% POE)	Average (50% POE)	Wet (10% POE)
Potential environmental watering – Tier 2 (additional priorities)	- Late autumn/winter fresh - Autumn fresh	- Late autumn/winter fresh - Autumn fresh	N/A	Autumn fresh
Possible volume of water for the environment required to achieve objectives	141 GL (Tier 1) 117 GL (Tier 2)	170 GL (Tier 1) 117 (Tier 2)	292 GL (Tier 1) 0 (Tier 2)	209 GL (Tier 1) 46 GL (Tier 2)
Priority carryover requirements for 2027-28	30 GL for baseflows over winter and spring or use in the Late autumn/winter 2027 fresh depending on climatic conditions.	50 GL for baseflows over winter and spring or use in the Late autumn/winter 2027 fresh depending on climatic conditions.	None required.	

*50 GL has been set aside for deliveries to the Broken Creek and Lower Goulburn Wetlands from CEWH/VEWH Goulburn entitlement in every scenario

Part 2 - Scenario planning logic/rationale

There has been a long period of wet conditions including multiple overbank flow events and prolonged inundation periods between 2021 to January 2024. In comparison since mid-2024 conditions have been dry with Goulburn River flows dominated by regulated releases to meet irrigation, IVT and environmental water demands as shown in Figure 3 for 2025-26. During 2025-26 all high priority environmental watering actions were able to be delivered in the mid and lower Goulburn River. The late spring fresh was determined not to be required. When planning for delivery of the late spring fresh conditions were dry with a high possibility of multiple IVT pulses being delivered from early December. Under this scenario, delivery of the late Spring fresh followed by multiple IVT pulses was determined to be a high risk to lower bank vegetation. Fish objectives were also taken into consideration; the spawning cues are not required every year for the long lived Golden and Silver Perch species. A Late spring fresh was delivered in 2021 and 2023 (plus high unregulated flows in 2022) it was determined to be a low risk to fish not to deliver the fresh. GB CMA and scientific monitoring confirmed not delivering the late spring fresh allowed lower bank vegetation to become established prior to the first IVT pulse in January. The lower Goulburn Autumn fresh was delivered in early March to early April. Wet conditions late February and March resulted in no IVT order for March, scientific advice confirmed that there were ecological benefits to continue the Autumn pulse at the time and shape as planned.

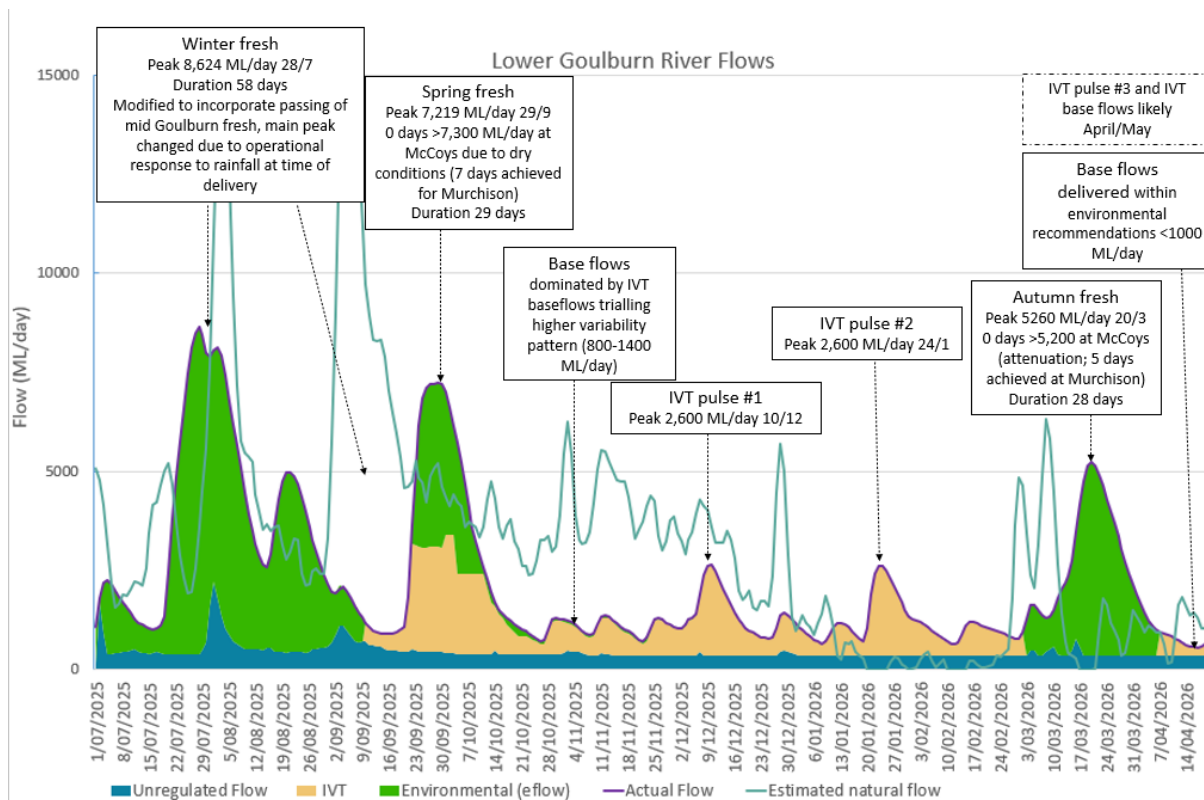


Figure 3 - Lower Goulburn River flows for 2025-26 year to date

When planning environmental watering actions for 2026-27 GB CMA have considered multiple factors including climatic conditions, water availability and variability both within and between years. Non-environmental flows and operational constraints of delivery within channel that influence flow variability are considered. There have been multiple years of high volumes delivered from a combination of wet years with near natural flows followed by high operational and environmental water deliveries under dry conditions in 2024-25 and 2025-26. Including the 2025 winter fresh and spring fresh that went for 58 and 29 days respectively. Predicted carryover volumes are considerably lower than previous years. As a result, there is a need to prioritise water for base flows and spring freshes in 2026, while conserving water for carryover in 2027-28 should dry conditions persist.

Environmental water deliveries in 2026-27 will be more reflective of the climatic conditions, with a focus on spring watering. In extreme dry to dry scenarios, smaller winter and spring freshes are planned, with the winter fresh identified as a Tier 2 priority. Average and wet scenarios include a winter fresh as Tier 1 and larger more variable flows planned for wet scenarios including providing variability from passing smaller freshes natural and regulated downstream of Goulburn Weir.

Environmental watering actions in the Goulburn River in 2026-27 will focus on striking a balance between enabling vegetation diversity to occur and supporting native fish populations. Bank vegetation has started to recover since prolonged flooding, however diversity remains low. Where possible there will be sufficient time between the spring fresh and late spring fresh to enable vegetation to be established.

Year-round base flows in all reaches are the highest priority based on scientific recommendations from the various environmental flow studies outlined in Section 6. Water for the environment will be particularly important for maintaining a minimum flow in reach 1 – immediately downstream of Lake Eildon – during winter, when there are no irrigation

releases. In this reach, winter and spring freshes are needed to periodically wet higher parts of the bank to enhance the growth and recruitment of native streamside vegetation and deter the growth of terrestrial species.

Scientific monitoring and advice have highlighted the importance of variability of flows particularly for bank condition. Streamology's report *Goulburn baseflow variability assessment 2025* highlighted the risk of bank notching from continual delivery with a limited range of flows. Recommendations were made in relation to changing environmental and IVT baseflows using a sawtooth pattern varying between 600 and 1000 ML/day (environmental) and 800 and 1,400 ML/day (IVT). GB CMA have adopted the recommendations of the report and recommended flow patterns for environmental and IVT baseflows to GMW (see Figure 4). Monitoring and analysis of 2025-26 base flow delivery by scientists will inform how successful the new regime has been.

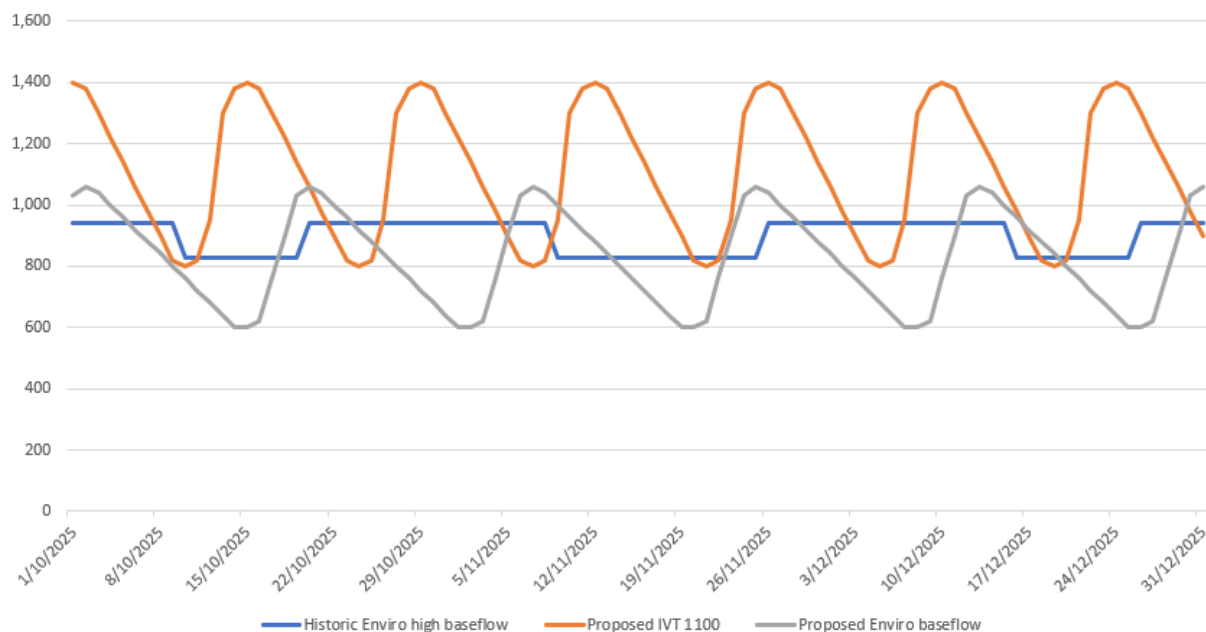


Figure 4: Changes to lower Goulburn variable base flow delivery

The Spring fresh/early spring fresh ('Spring fresh') are the highest priorities of the freshes planned for 2026-27. The Spring fresh primes the system and is a key hydrological feature for all Goulburn River ecological values. The timing and the shape of the fresh will be determined by the conditions described above and also operational constraints if demand is high at Goulburn Weir and interplay with the late spring fresh timing

A priority this year will be having environmental water available to minimise the impact on the Goulburn Rivers ecology from runoff from catchment impacted by the 2026 Longwood and Trawool fires through the delivery of ecological risk mitigation flows and Goulburn water quality reserve. 140,000 ha catchment has been burnt, and it expected to take multiple years for the catchment to recover. In the meantime, intense rainfall over impacted catchments may result in soil, ash and debris flowing into the Goulburn River resulting in poor water quality and impacting instream habitat. Environmental water may be used to dilute flows or provide temporary refuge for aquatic fauna. Freshes will also play a role in maintaining instream habitat impacted from the fire affected runoff. Ecological risk mitigation flows can also be used to dilute other non-post fire related small tributary hypoxic water events and nutrient runoff from human activities and thus minimise the risk of hypoxic water. Environmental water will be used to slow the recession of any high unregulated flows from Goulburn Weir to protect downstream banks from erosion.

A Winter fresh is important to maintain habitat complexity through scouring and channel forming processes. The fresh provides connection to off stream habitat and food for aquatic fauna. Delivering a winter fresh aims to provide platypus with cues to build nests higher on the banks to reduce the chances of nests being drowned through delivery of water for the environment and operational flows (<10,000ML/day). The winter fresh is important for maintaining geomorphic diversity as it allows for maximum river flow under regulated conditions due to not competing with irrigation water for operational capacity. The plan is to deliver the mid and lower Goulburn River winter fresh as one event, the exact timing is flexible to accommodate downstream and operational needs. Under the drier inflow scenario's there may not be sufficient water to deliver the winter fresh and meet the higher priority actions and is included as a Tier 2 action.

Native fish objectives are continued to be supported by the key watering actions, hypoxic water events in recent years may have had a potential negative impact on fish populations. Monitoring results have indicated small bodied fish are starting to recover. Flow objectives for the small bodied fish align with the objectives for littoral and lower bank vegetation. Low flows generate the largest areas of slackwater over the summer period and provide habitat for small bodied fish to recruit and grow.

Under all scenarios a late spring fresh is listed as a Tier 1 priority as it has not been delivered since 2023. Under extreme dry and dry scenarios, it's dependent on IVT deliveries contributing to the fresh. Golden and silver perch do not need to spawn every year to maintain good populations. Based on scientific advice a late spring fresh has not been delivered since 2023, therefore it is a priority this year under all scenarios to deliver a late spring fresh. All other watering actions support fish populations, monitoring is showing a healthy population for most native fish species.

Delivery of an Autumn fresh has been listed as a Tier 1 for average conditions only. The drier scenarios have it as Tier 2 due to water availability. In dry conditions it's expected there will be a high need for IVT delivery. Coordination will hopefully allow the Autumn fresh to be delivered with IVT in these scenarios. If climatic conditions are wet then it is unlikely that an Autumn fresh will be required unless there is high fish migration in the mid Murray that could move into the Goulburn if a fresh was delivered. The vegetation and other ecological effects would be met by wet conditions.

The final focus for environmental watering in the Goulburn River in 2026-27 will be to deliver between one and three freshes in the mid-Goulburn under average to wet conditions. The aim of these freshes are to replicate seasonal conditions and freshes that are captured in Lake Eildon. Where possible the fresh(es) would be in conjunction with high tributary inflows downstream of Lake Eildon between May and November in reach 1 to reinstate some natural flow variation and connect floodplain wetlands between reach 1 and reach 3. This will allow fish and platypus to access off-channel habitats for feeding and breeding. Opportunities to pass mid-Goulburn tributary flows and freshes to improve ecological condition of the lower Goulburn through variable flows will also be considered.

The year-round low flow and freshes may be fully or partially achieved with natural flows in the wetter planning scenarios, and operational releases (such as IVTs) may help meet Goulburn environmental flow targets under the drier planning scenarios.

This proposal considers annual environmental water management under a range of possible climate and corresponding water resource availability scenarios for 2026-27 ranging from extreme dry to wet. Given long term watering priorities, antecedent conditions and watering actions achieved in 2025-2026, prioritisation and delivery of the environmental watering actions for 2026-27 have been based around the following principles:

1. Mitigate water quality and instream habitat impacts from 2026 Longwood fires.
 - a. High risk of water quality being impacted from intense rainfall over impacted catchments may result in soil, ash and debris flowing into the Goulburn River. In stream habitat may also be impacted through smothering.
 - b. Deliver ecological risk mitigation flows or water quality reserve if/when required to dilute or provide refuge to aquatic fauna depending on the timing, location and magnitude of the event.
 - c. Planned freshes will also improve in channel habitat through flushing and scouring.
2. Maximise variability of flow events to minimise potential impacts on banks of repeat/constant flow at the same level.
 - a. Scientific advice is that there is a risk to bank condition from repeat/constant flow at the same level. Variability is the key to minimise the risk.
3. Protect the bank and aquatic biota by minimising erosion and mass failure of the lower bank, managing water quality and mobilise sediments/seed.
 - a. Delivery ecological risk mitigation flows in the lower Goulburn when/if required.
4. Achieve specific fish outcomes – cue Golden and Silver perch spawning and attraction into the river.
 - a. Low flows over summer maximise habitat for small bodied fish and the potential for maximising population growth
 - b. The spring fresh and summer baseflows are the highest priority watering actions for fish, in particular Murray and Trout Cod and small bodied fish.
 - c. Delivering a late spring fresh and attractant flow in Autumn will aid in Perch population outcomes
5. Maintain existing bank vegetation and promote diversity of bank vegetation.
 - a. Scientific advice and monitoring results indicate that it will take multiple years for lower bank vegetation to fully recover from severe disturbances i.e. multiple prolonged inundations during growth period. Vegetation is recovering with abundance improving, diversity remains relatively low.
 - b. Scientific advice is that the best flow regime for bank vegetation is to deliver the early spring fresh and maximise the time of baseflows over summer and Autumn.
 - c. To protect plants and new germinates, only deliver the late spring fresh if there is less than 1 week between the early spring fresh and the late spring fresh, or there has been 6 weeks of baseflows following the early spring fresh.
 - d. Consider antecedent and bank vegetation condition in regard to the Autumn fresh. Mid an upper bank vegetation should be fully grown and needing water and littoral vegetation should be established.
6. Maximise platypus breeding success by providing nesting cues, especially in the mid Goulburn.

- a. Under average or wet conditions, deliver the Winter fresh a same or higher magnitude than Spring fresh to provide cues for platypus burrow selection.
 - b. Scientific advice indicated that it's important to have low flows over summer to minimise impacts on juveniles emerging from burrows.
7. Increasing habitat by connecting low lying floodplain features in the mid Goulburn.
- a. Deliver reach 1 objectives especially variable winter/spring fresh(es) between May and November under average to wet conditions in conjunction with high mid Goulburn tributary flows.

8 ENGAGEMENT

There are two main audiences for engagement in the development of this proposal and are included in Table 6. The primary audience are the agencies involved in delivering the proposed flows. This includes GMW, the Victorian and Commonwealth Environmental Water Holders and the Murray-Darling Basin Authority (river operators and the Living Murray program).

The VEWH will use this proposal as the basis for developing their Seasonal Watering Plan. Water allocated is to be delivered in accordance with the plan and the plan is used to seek agreement from other water holders for the use of their water. Routine communication (videoconference, phone, email) will report on deployment of water under the plan.

The CEWH may allocate water to the Seasonal Watering Plan which is based on this proposal. Environmental water releases from the Goulburn River also assist in achieving further benefits at downstream environmental sites. Routine communication will be via the VEWH.

GMW is the key water delivery agency for this plan. When the final proposal for 2026-27 is agreed, communications with GMW will continue to manage environmental water orders and releases and informing GMW and their customers of the intended purpose.

MDBA (river operators) is responsible for calling out Inter-Valley Transfers (IVT). IVT orders are placed with GMW. However, regular communications (phone, email) throughout the year with the GB CMA will be aimed at delivering IVT in line with the 2022 operating rules and GMW's 2026-27 operating plan. As the operating plan is still in a draft state and not protected in legislative instruments there will be ongoing communication on implementation and review, operating rules and trade rules may impact on the delivery of IVT into 2026-27.

A Goulburn and Broken Operational Advisory Group was formally established by the VEWH in 2016 and is comprised of representatives from the VEWH, MW, CEWH, TLaWC, YYNAC, MDBA and GBCMA. This group aims to provide a regular and coordinated forum to discuss the environmental water resource management planning and delivery in the Goulburn River, Broken River and lower Broken Creek and discuss how this impacts system scale coordination of consumptive and other environmental water.

The secondary audience of this proposal are those potentially affected by, or interested in, environmental flows but not directly involved in planning and delivery. This includes Parks Victoria, water users along the river, local government, Victorian Fisheries Authority (VFA), environment groups and the general public. The communication objective for these groups is to provide information about the decision to provide environmental flows and what it is trying to achieve. These communications are generally through media articles, emails, and potentially through presentations to special interest groups and direct engagement.

To assist with engaging the community, the GB CMA established a Goulburn Environmental Water Advisory Group (GEWAG) in 2012. The aim of the GEWAG is for community members and interest groups to provide feedback to the CMA on river health trends observed by landholders and river users and provide advice on planning environmental water use. The group comprises community members and representatives from key agency partners. Indigenous groups (YYNAC and TLaWC) have a seat in the group and are starting to attend the meetings on a regular basis. At times, limited resources have restricted their involvement and when this happens, they are consulted through separate meetings or discussions.

The GB CMA actively engaged with all stakeholders throughout the year in the planning, delivery and review of environmental watering actions. Engagement highlights for 2025-26 included the September EWAG tour of the lower Goulburn River and Reedy Swamp. In October GB CMA led Southern Connected Basin Environmental Water Committee (SCBEWC) tour of the lower Goulburn River. This tour provided an invaluable opportunity to demonstrate to key stakeholders the ecological values of the Goulburn River and to highlight the complexities and risks associated with delivering high volumes of operational and environmental water to meet downstream demands.

Throughout 2025-26 a mix of media releases, social media and attendance to community days such as the Murray Codference was used to engage the broader community. Regular formal and informal engagement with Goulburn scientists continued. Including participation in the Goulburn to Murray and FlowMER workshops, as well as targeted work with Streamology on flow variability. Access to scientists with in-depth knowledge of the Goulburn River continues to provide invaluable insights that inform environmental water management.

Table 6: Summary of stakeholder engagement that informed this Seasonal Watering Proposal

Stakeholder(s)	Engagement method	Engagement purpose
Program Partners (Government Agencies) • GMW • VEWH • CEWH • Parks Victoria • MDBA/TLM • VFA	• Goulburn Environmental Water Advisory Group (GEWAG) meeting on the 16/2/2026 (not all agencies could attend but received meeting notes) • Direct engagement • Draft SWP sent for review and comment	• Seek input to development of proposal and ensure partners understand any issues in environmental water planning and provide feedback on any constraints to delivery
Traditional owners • Taungurung • Yorta Yorta	• GEWAG meeting on the 16/2/2026 (or via meeting notes) • Direct engagement • Draft SWP sent for review and comment	• Seek feedback on environmental water priorities for 2026-27 • Incorporate feedback and observations on river condition and objectives into the SWP
Technical experts • Scientific leads from the CEWH Monitoring, Evaluation and Research Program – Goulburn River • G-M trade rule review Scientific Advisory panel	• Direct engagement through various sources including Flow-MER annual results workshop 2/3/2026. • Regular communication via email and phone	• Seek advice from scientists on their observations/learnings from monitoring and adapting plans/objectives to these results for fish, bank vegetation, macroinvertebrates, bank condition and platypus
Recreational users and Local businesses • Burnanga Indigenous Fishing Club • Trellys fishing and hunting • Local ecotourism operator	• GEWAG meeting on the 16/2/2026 • Direct engagement throughout 25/26 on watering actions • Review of the draft SWP	• Seek feedback on environmental water priorities for 2026-27 • Incorporate feedback on social and recreational use of the river and observations of river condition
Community and Environment groups • Goulburn Valley Environment Group	• GEWAG meeting on the 16/2/2026 • Direct engagement throughout 25/26 on watering actions • Review of the draft SWP	• Seek feedback on environmental water priorities for 2026-27 • Incorporate feedback and observations on river condition into the SWP
• Landholders	• GEWAG meeting on the 16/2/2026 • Direct engagement throughout 25/26 on watering actions • Review of the draft SWP	• Seek feedback on environmental water priorities for 2026-27 • Incorporate feedback and observations on river condition into the SWP

9 RISK MANAGEMENT

The risks associated with the delivery of the priority watering actions, the identified mitigation actions and the lead agency responsible for implementing the mitigation actions are listed in Table 7 below. The table below includes all Goulburn specific risks and all risks with a pre-mitigation risk rating medium or higher.

Table 7: Risk assessment of proposed water delivery

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
Environment	Specified flow rates are insufficient to achieve the intended extent of wetland inundation or magnitude and duration of river flows, resulting in a failure to achieve planned environmental outcomes. Applicable to post-flood environment.	Possible	Moderate	Medium	• Include contingency allowance in estimated watering requirements, based on previous event data, and consider a contingency in the duration of the event to achieve desired wetland inundation. • Monitor event (especially for deliveries to new sites or for previously untested events) and adjust flows as necessary, or terminate event if it becomes clear that insufficient water is available. • Identify and address constraints that may limit the flow rates for environmental deliveries.	CMA CMA CMA/GMW	Unlikely	Minor	Low	Static
Reputational	Specified flow rates are insufficient to achieve the intended extent of wetland inundation or magnitude and duration of river flows, resulting in a failure to achieve planned environmental outcomes and loss of community support.	Possible	Moderate	Medium	• Communications on the environmental benefits of watering actions. • Monitor event (especially for deliveries to new sites or for previously untested events) and adjust flows as necessary, or terminate event if it becomes clear that insufficient water is available. • Communicate the need for complimentary measures to optimise	CMA	Unlikely	Minor	Low	Static

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
					the benefits of environmental watering actions.					
Legal	Environmental releases, either on their own or potentially in combination with unexpected tributary inflows, cause unauthorised inundation of private land, resulting in impacts on landowner activities and assets.	Possible	Moderate	Medium	- Release plans designed to avoid exceeding operational thresholds or unauthorised flooding. - Monitor events and adjust releases to avoid overbank flows. This may include limiting deliveries to daylight hours only, where feasible and consistent with watering requirements. - Monitor forecast rainfall and tributary inflows and adjust releases to avoid overbank flows. - Monitor deliveries to new locations to build an understanding of flow patterns and inundation thresholds and adjust releases accordingly. - Investigations post flood to determine commence to flow of major erosion in the Mid Goulburn (and other systems as required) - Seek advice from storage operator of any known changes in bank levels and commence to flow levels	CMA CMA GMW/MDBA GMW/MDBA CMA CMA Storage operator	Unlikely	Moderate	Low	Static
Reputational	Public land and/or access routes into public land areas may be inundated by delivery of environmental water, leading to potential impacts on recreational opportunities for park users	Almost certain	Moderate	High	Watering proposals to identify potential impacts. communication of planned events, access closures, alternative recreational opportunities and alternative access routes	CMA/ Land Manager cma	Likely	Minor	Low	Static

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
	(e.g. access to boat ramps, fishing spots, firewood collection etc.). Applies to lower Goulburn - rated for this site - no access roads impacted, but boat ramps, sandbars and beaches could be.				Plan event timings to limit flow changes during peak visitation periods where possible and when it doesn't impact environmental outcomes.					
Environment	Environmental water deliveries may generate or mobilise BGA blooms, with adverse water quality and/or health impacts (including to people, livestock and pets), resulting in cessation of releases and environmental impacts.	Possible	Moderate	Medium	- Consider likelihood of initiating BGA blooms in event planning and amend as required to manage risk, including investigation alternate delivery paths - e.g. lower outlets/offtakes, or non-delivery (e.g. as per 2022 for lower Broken creek) - Land managers or water corporation implement a risk-based monitoring program during environmental watering events, and where issues are identified, activate BGA response processes. <i>*Notes: Parks Victoria are currently writing a BGA risk management plan for Northern Victoria Region that considers the potential risk of environmental water events. This plan will outline proactive and reactive monitoring and management responsibilities that Parks Victoria commits to as a Local Waterway Manager for BGA. Adequate BGA resourcing is being considering as part of this plan.</i> - Regional monitoring and advice on BGA status.	CMA / GMW Land Manager GMW	Unlikely	Minor	Low	Static

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
Reputational	Environmental water management activities may conflict with or not complement water based recreational objectives, leading to loss of community support for activities. Highest risk at Goulburn River (for river/creek sites) - rated accordingly.	Almost certain	Moderate	High	- Communicate benefits of environmental water management to the broader community and engage with recreational user peak bodies. - Engage with local recreational user groups to inform them of environmental water management activities and the underlying rationale. - Adjust events or actions to reduce/avoid impact where practical without reducing environmental outcomes. - Pro-active communication with local stakeholders to identify recreational activities planned and to advise of e-water flow plans to inform planning by all parties - Communicate alternate recreational opportunities. - Enhance community understanding of water system operations and entitlement frameworks (water literacy). - Implement earlier planning of events to provide more time for partners to consider and flag any potential issues to include in event plans	VEWH CMA CMA CMA Land Manager VEWH CMA	Possible	Minor	Low	Static
Legal	Failure to recognise cultural heritage issues at a site targeted for watering may result in necessary permits and approvals not being obtained, leading to prosecution and fines.	Possible	Moderate	Medium	- Undertake desktop reviews and site assessments with archaeologists, traditional owners and land managers, to identify approval needs and contingency measures. - Obtain any necessary formal approvals/permits and implement required actions.	CMA	Unlikely	Minor	Low	Dynamic

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
					- Seek necessary resources to undertake approvals and assessments					
Reputational	Inability to demonstrate outcomes achieved through environmental watering activities may lead to a loss of public/political support for activities	Possible	Major	Medium	• Rationalise and refocus current monitoring programs (e.g. Wetmap) to better identifying outcomes. • Seek additional funds to address gaps in monitoring programs and knowledge. • Communicate the benefits of environmental watering and monitoring results (Note: It may not be possible/affordable to address all monitoring gaps, so this risk may still be rated as medium after mitigation actions.) <i>Residual risk for 2026-27 reflects recent high flows experience - some community nervousness, general acceptance of ewater benefits</i>	DELWP VEWH CMA	Possible	Minor	Low	Static
Environment	Environmental deliveries improve conditions for non-native species (e.g. carp, invasive species, deer) and over-abundant native species (e.g. kangaroos, Red Gum encroachment) leading to adverse environmental impacts. Particular issue in Goulburn River (risks of carp migration into system has impacted flows proceeding - likely to happen regardless), but applicable to all river systems.	Likely	Moderate	Medium	• Study/understand life history of species and develop high level management strategies. • Develop and implement site specific management strategies aimed at eradication/control of existing populations (e.g. carp management strategy, willow removal program, water-lily spraying program, feral animal programs). - Implement pest reduction efforts prior to delivery of water, to ensure increases in populations remain within "tolerable" levels, e.g. consider adjusting timing and	DELWP CMA/Land Manager	Possible	Minor	Low	Dynamic

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
					magnitude of flows, and check in with fish ecologists					
Reputational	Sections of the community perceives (incorrectly) that high river flows are due to environmental releases in dry conditions, leading to a loss of support for watering activities.	Possible	Moderate	Medium	- Communications to inform the community on the drivers/reasons for high flows in river systems, especially under dry scenarios - residual risk based on 26-27 conditions	System operator & CMA	Unlikely	Minor	Low	Dynamic
Reputational	Under dry conditions, community expectations of the extent of environmental watering that can be achieved are not met, leading to a loss of support for environmental watering actions. Note - e-water deliveries may be constrained in 26-27 due to high consumptive avail.	Possible	Moderate	Medium	- Communications to inform the community on the limits of environmental water holdings and the extent of actions possible under dry conditions. - Note that public concern in this regard may be heightened as a result of the Menindee 2019 fish death events. - residual risk based on 26-27 conditions	CMA	Unlikely	Minor	Low	Dynamic

Risk category	Risk description	Pre-Mitigation Risk			Mitigation actions	Lead organisation for action	Residual Risk			Risk type Static or Dynamic
		Likelihood	Consequence	Risk Rating			Likelihood	Consequence	Risk Rating	
Environment	High operational and consumptive water demands lead to reduced access for environmental deliveries, with the result that target flows/volumes cannot be achieved, impacting on environmental outcomes Note: Consumptive water en route may achieve some outcomes in Goulb, but limiting e-water from the Goulburn has d/s implications for environmental outcomes at downstream Victorian sites in the Murray system, as well as the Murray River and Lower Lakes	Likely	Moderate	Medium	- Event planning will seek to avoid peak demand periods, and events will be monitored and adjusted as necessary. - Ensure SCBEWC multi-site planning includes operational demands in its planning for downstream sites - System operators to provide longer term forecasts for future consumptive demands as an input to planning watering proposals (including consideration of implications of Lower Broken Ck IVT management and delivery) - Develop longer term agreements on river capacity access for environmental deliveries, with interim processes for capacity sharing at bulk level <i>- residual risk based on 26-27 conditions</i>	CMA and GMW VEWH GMW/MDBA VEWH	Possible	Minor	Low	Dynamic
Environment	Delivery of e-water actions leads to overall flows (in conjunction with consumptive deliveries) to exceed environmental tolerances, resulting in environmental harm. Risk assessment based on 26-27 conditions in Goulburn	Possible	Minor	Low	- Apply adaptative management to spring fresh planning including consideration of antecedent conditions, and use a risk based approach to balancing potential benefits and potential harms - Seek scientific advice regarding ecological condition and likely implications of watering actions - Implementation of Goulburn to Murray trade rule and associated flow limits and co-ordination through the Goulburn OAG to maximise	GB CMA GMW	Possible	Minor	Low	Dynamic

		Pre-Mitigation Risk					Residual Risk			Risk type Static or Dynamic
Risk category	Risk description	Likelihood	Consequence	Risk Rating	Mitigation actions	Lead organisation for action	Likelihood	Consequence	Risk Rating	
					potential for combining operational and environmental actions					

10 APPROVAL

WATERWAY MANAGER APPROVAL OF THE SEASONAL WATERING PROPOSAL

I, the authorised representative of the agency shown below approve the Seasonal Watering Proposal for the Goulburn River in 2026-27 and declare that:

- the information provided in this proposal is true and correct,
- all required approvals and endorsements from storage managers, land managers, Traditional Owners or other relevant party have been granted, and
- unless otherwise stated, any consent/s required to use or reproduce Traditional Owner language and knowledge has been obtained.

SIGNED FOR AND ON BEHALF OF GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

Signature of authorised representative:

A handwritten signature in black ink, appearing to be 'C Walters', is written on a light yellow rectangular background.

Name of authorised representative: Carl Walters

Position of authorised representative: CEO

Date: 29/04/2026

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12 APPENDICES

Appendix 1

A summary of all potential watering actions and relative priority under each climate/water resource scenario during 2026-27 for reaches 1 to 5 is provided in Table 8. Watering actions have prioritised the delivery of base flows and spring fresh(es), and carryover for 2027-28 for base flow and spring fresh delivery. Watering actions rely on the assumptions of other operational flows see Table 9 below for detail. The ecological conditions would not be met for mid Goulburn freshes under extreme dry to dry scenarios. Watering actions listed as Y are planned for delivery, those listed as P will potentially be delivered under the scenario but additional water availability, ecological or flow conditions must be met before delivering this watering action.

Table 8: Summary of potential environmental watering actions provided under each water resource scenario

Priority	Compliance point; Eildon, Murchison, McCoys	Potential environmental watering actions	Scenario 1 – Extreme dry (99% PoE)	Scenario 2 – Dry (90% PoE)	Scenario 4 – Average (50% PoE)	Scenario 5 – Wet (10% PoE)
1	Murchison McCoys	Year round low flows Provide a year round low flow 500 – 1,000 ML/day in reach 4 and 5 for habitat diversity and sustaining the system	Y	Y	Y	Y
2	Eildon	Year round low flows Provide a year round variable low flow of 400-2,000 ML/day to reach 1	Y	Y	Y	Y
3	Murchison McCoys	Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability. A standing order will be placed with GMW to deliver recession flows and dilution flows for hypoxic water and post fire poor water quality up to 6,000 ML/day. In addition to opportunities to pass mid-Goulburn tributary flows and freshes. *Listed as tier 1 but hard to predict when and if these will be required	P	P	P	P
4	Murchison McCoys	Spring fresh/Early spring fresh	Y	Y	Y	Y

Priority	Compliance point; Eildon, Murchison, McCoys	Potential environmental watering actions	Scenario 1 – Extreme dry (99% PoE)	Scenario 2 – Dry (90% PoE)	Scenario 4 – Average (50% PoE)	Scenario 5 – Wet (10% PoE)
	Eildon	Provide a spring fresh through all reaches (>7,300 ML for 7 days) up to 10,000 ML/day in September - October to prime the system for lower bank vegetation establishment and maintenance.				
5a	Murchison McCoys	Late autumn/winter fresh Provide a fresh up to 10,000 ML/day (or high as possible) between May - August. Minimum peak flow of 7,300 ML/day for 4 to 5 days	P	P	Y	Y
5b	Eildon	Mid Goulburn winter fresh Deliver the fresh peak flow of > 8,000 ML/day for 5 to 10 days between late July and August. Single flow rate held < 7 days. If can't be delivered in conjunction with lower Goulburn fresh	P	P	Y	Y
6	Murchison McCoys	Autumn fresh Provide an autumn fresh (>5,700 ML/day for 1 to 7 days) between March and May	P	P	Y	P
7	Murchison McCoys	Late Spring Fresh Provide a fresh for fish spawning of short duration (>6,600 ML/day for 2 days and >1,500 ML/day for around 14 days) between October and December	Y	Y	Y	Y
8	Eildon	Variable autumn/winter/spring fresh(es) Provide up to three freshes in reach 1 of >5,000 ML/d for 5-10 days between May and November.	-	-	Y	Y

Detailed scenario planning 2026-27

The detailed scenario planning Table 9 below provides further details to support the scenario planning table in Section 7. This table gives further insight into the complexities and likely flow regimes under different flow scenarios.

Table 9: Detailed Scenario Planning in 2026-27

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
Expected river conditions	- No unregulated flow - Poor water quality from runoff from fire affected catchments in random rain events - Hypoxic water could be an issue over the warmer months. - IVT to be delivered at maximum rates under the Goulburn Operating arrangements	- One or two small, short duration freshes in winter/spring (perhaps up to 5,000 ML/day) and reasonable baseflows for half a month - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months - IVT to be delivered at maximum rates under the Goulburn Operating arrangements	- Potential spills through Goulburn Weir with one to three freshes (3,000 to 20,000 ML/day) and reasonable baseflows for most of the year likely flow targets will be provided for winter and spring by unregulated flow - Poor water quality from runoff from fire affected catchments - Hypoxic water could be an issue over the warmer months - Not all IVT will be delivered but unregulated flows would meet baseflow targets during winter and spring.	- Overbank flows - Unregulated flow to provide the majority of flow over winter and spring and potentially into summer - Poor water quality from runoff from fire affected catchments - Not all IVT will be delivered but unregulated flows would cover baseflow needs. - Hypoxic water could be an issue over the warmer months.
Bulk entitlement minimums will be delivered 400 ML/day at McCoys from July – October 250ML/day d/s Lake Eildon to June 2026 (high inflow trigger) then 120ML/day				
Expected water allocations at February 2027	13% HRWS allocation	45% HRWS allocation	100% HRWS	100% HRWS
Expected water availability from water holders *	CEWH – 44 GL TLM – 6 GL VEWH – 3 GL	CEWH –152 GL TLM – 20 GL VEWH – 11 GL	CEWH – 337 GL TLM – 45 GL VEWH – 25 GL	CEWH –337 GL TLM – 45 GL VEWH – 25 GL
Forecast carryover from 25/26	CEWH, TLM and VEWL combined 170 GL			

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
Total water available from water holders (includes LBC 50GL)	173 GL (223 GL)	304 GL (354 GL)	528 GL (578 GL)	528 GL (578 GL)
Demands	50 GL has been set aside for deliveries to the Broken Creek and Lower Goulburn Wetlands from CEWH/VEWH Goulburn entitlement in every scenario			
Assumed IVT available	450 GL ⁺	450 GL ⁺	450 GL ⁺	450 GL ⁺
Assumed IVT water deliveries to support Goulburn River environmental outcomes	IVT base flow delivery September to May + 50% all freshes, excluding winter fresh	IVT base flow delivery September to May + 50% all freshes, excluding winter fresh	IVT base flows November to March and 1 pulse in January	IVT base flows February to April only
Priority watering actions				
Teir 1				
1	Provide a year round baseflow of 500 - 1000 ML/day in reach four and five for habitat diversity and sustaining the system IVT base flow delivery assumed between September and May Total volume: 239 GL Passing Flows: 105 GL Unregulated: 0 GL IVT: 239 GL Assumed Ewater use 53 GL	Provide a year round baseflow of 500 - 1000 ML/day in reach four and five for habitat diversity and sustaining the system IVT base flow delivery assumed between September and May Total volume: 236 GL Passing Flows: 103 GL Unregulated: 0 GL IVT: 236 GL Assumed Ewater use 53 GL	Provide a year round baseflow of 500 - 1000 ML/day in reach four and five for habitat diversity and sustaining the system Unregulated contribution calculated on average of previous average years.. IVT base flows Nov-March + 1 pulse in Jan. IVT and unregulated flows can meet base flow demands conservative 50 ML/day allowed for base flow days Total volume: 223 G+L Passing Flows: 98 GL Unregulated: more than required IVT: 145 GL Assumed Ewater use 15 GL	Provide a year round baseflow of 500 - 1000 ML/day in reach four and five for habitat diversity and sustaining the system. Flows includes season appropriate higher variable flows mostly accounted for with unregulated contributions. Unregulated contribution calculated on average of previous wet years. IVT base flows Feb to Apr. IVT and unregulated flows can meet base flow demands conservative 50 ML/day allowed for base flow days Total volume: 372 GL+ Passing Flows: 104 GL Unregulated: more than required IVT: 66 GL

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
				Assumed Ewater use 15 GL
2	Provide a year round variable baseflow of 400-2,000 ML/day to reach 1. Assume all use re-captured and not spilt, loss allowance. Assumed Ewater use 20 GL	Provide a year round variable baseflow of 400-2,000 ML/day to reach 1. Assume all use re-captured and not spilt, loss allowance. Assumed Ewater use 20 GL	Provide a year round variable baseflow of 400-2,000 ML/day to reach 1. Assume a most spilt. Assumed Ewater use 70 GL* *also includes mid Goulburn Fresh)	Provide a year round variable baseflow of 400-2,000 ML/day to reach 1. Assume long duration of delivery and all spilt. Assumed Ewater use 100 GL* *also includes mid Goulburn Fresh and Winter Fresh
3	Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability Provide higher baseflows or freshes up to 6,000 ML/day for environmental risk mitigation or to pass Reach 1 freshes to mimic natural variability through the length of the Goulburn River Risk Mitigation increased due to high risk of WQ issues from fire affected catchment. Also have access to 30GL WQ reserve. Assumed Ewater use 20 GL	Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability Provide higher baseflows or freshes up to 6,000 ML/day for environmental risk mitigation or to pass Reach 1 freshes to mimic natural variability through the length of the Goulburn River Risk Mitigation increased due to high risk of WQ issues from fire affected catchment. Also have access to 30GL WQ reserve. Assumed Ewater use 20 GL	Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability Provide higher baseflows or freshes up to 6,000 ML/day for environmental risk mitigation or to pass Reach 1 freshes to mimic natural variability through the length of the Goulburn River Risk Mitigation increased due to high risk of WQ issues from fire affected catchment. Also have access to 30GL WQ reserve. Assumed Ewater use 50 GL	Ecological risk mitigation flows Maintain water quality and protect the banks from erosion or mimic natural variability Provide higher baseflows or freshes up to 6,000 ML/day for environmental risk mitigation or to pass Reach 1 freshes to mimic natural variability through the length of the Goulburn River Risk Mitigation increased due to high risk of WQ issues from fire affected catchment. Also have access to 30GL WQ reserve. Assumed Ewater use 50 GL

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
4	Provide an early spring fresh to reach 4-5 (>7,300 ML for 7 days) up to 10,000 ML/day in September and October to prime the system for lower bank vegetation establishment and maintenance. It's expected that the Reach 1 spring fresh will be covered in this event as Eildon releases will make up the majority of flows. Smaller duration to reflect the dry conditions With high IVT volumes and low flows its expected that IVT will significantly contribute to fresh. Total volume: 113 GL Passing Flows: 10 GL Unregulated: 0 GL IVT: 57 GL Assumed Ewater use 47 GL	Provide an early spring fresh to reach 4-5 (>7,300 ML for 7 days) up to 10,000 ML/day in September and October to prime the system for lower bank vegetation establishment and maintenance. It's expected that the Reach 1 spring fresh will be covered in this event as Eildon releases will make up the majority of flows. Slightly bigger event than dry With high IVT volumes and low flows its expected that IVT will significantly contribute this fresh Total volume: 139 GL Passing Flows: 11 GL Unregulated: 0 GL IVT: 69 GL Assumed Ewater use 59 GL	Provide an early spring fresh to reach 4-5 (>7,300 ML for 7 days) up to 10,000 ML/day in September and October to prime the system for lower bank vegetation establishment and maintenance. It is assumed that the spring fresh will be met be a combination of unregulated flows and Eildon releases. Unregulated contribution calculated on average of previous average years. A separate fresh may be required if lower Goulburn is met naturally to meet reach one objectives. The event may not be able to be delivered due to high unregulated flows and flow capacity constraints. Total volume: 169 GL Passing Flows: 12 GL Unregulated: 133 GL IVT: 0 GL Assumed Ewater use 59 GL	Provide an early spring fresh to reach 4-5 (>7,300 ML for 7 days) up to 10,000 ML/day in September and October to prime the system for lower bank vegetation establishment and maintenance. It is assumed that the spring fresh will be met be a combination of unregulated flows and Eildon releases. Unregulated contribution calculated on average of previous wet years. A separate fresh may be required if lower Goulburn is met naturally to meet reach one objectives. The event may not be able to be delivered due to high unregulated flows and flow capacity constraints. Total volume: 147 GL Passing Flows: 9 GL Unregulated: more than required GL IVT: 0 GL Assumed Ewater use 1 GL
5a	-	-	Provide 2026 winter fresh to reach 4-5 of (>7,300 ML for 4-5 days) up to 10,000 ML/day June- July for channel forming, and platypus nesting cues. Aim to use a natural fresh and provide most of the event from rainfall runoff with minimal releases from Lake Eildon. Some unregulated flow will contribute to the event. Unregulated contribution calculated on average of previous average years.	Provide 2026 winter fresh to reach 4-5 of (>7,300 ML for 4-5 days) up to 10,000 ML/day in June- July for channel forming, and platypus nesting cues. In this scenario it's likely that unregulated flow will contribute significantly to or exceed the event magnitude. Unregulated contribution calculated on average of previous wet years. Total volume: 169 GL

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
			Total volume: 111 GL Passing Flows: 8 GL Unregulated: 63 GL IVT: 0 GL Assumed Ewater use 49 GL	Passing Flows: 12 GL Unregulated: 156 GL IVT: 0 GL Assumed Ewater use 34 GL
5b	-	-	Provide a winter fresh to reach 1 of >8,000 ML/d (or as high as possible) for 5-10 days between June and July to connect low lying wetlands and provide a nesting cue for platypus. Likely only a partial release due to trib flow. Will use R4/5 allocated volume. Assumed Ewater use 0 GL	Provide a winter fresh to reach 1 of >8,000 ML/d (or as high as possible) for 5-10 days between June and July to connect low lying wetlands and provide a nesting cue for platypus. Likely to be delivered as a separate winter fresh from reach 4 and 5, and spilt or passed through the lower Goulburn River. Assumed Ewater use 0 GL* *incorporated in reach 1 base flow calculations
6	-	-	Provide an autumn fresh (>5,700 ML for 2-5 days) between March and May for lower bank vegetation reinvigoration and maintenance and/or fish migration outcomes. <i>NOTE: this fresh will only be delivered depending on flow and vegetation condition over the summer period but unlikely due to the high unregulated flows expected</i> (60GL) Assume IVT baseflow is incorporated Total volume: 99 GL Passing Flows: 10 GL Unregulated: 12 GL	-

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
			IVT: 20 GL Assumed Ewater use 57 GL	
7	Provide up to three freshes in reach 1 of >5,000 ML/d for 5-10 days between May and November to mimic natural flow variability and connect wetlands. No freshes planned to align with natural cues i.e. minimal Upper and Mid Goulburn tributary inflows Assumed Ewater use 0 GL	Provide up to three freshes in reach 1 of >5,000 ML/d for 5-10 days between May and November to mimic natural flow variability and connect wetlands. No freshes planned to align with natural cues i.e. minimal Upper and Mid Goulburn tributary inflows Assumed Ewater use 0 GL	Provide up to three freshes in reach 1 of >5,000 ML/d for 5-10 days between May and November to mimic natural flow variability and connect wetlands. Most will be met by natural flows but expect one or more to be delivered from Eildon Assumed Ewater use 0 GL* *incorporated in reach 1 base flow calculations	Provide up to three freshes in reach 1 of >5,000 ML/d for 5-10 days between May and November to mimic natural flow variability and connect wetlands. Most will be met by natural flows but expect one or more to be delivered from Eildon Assumed Ewater use 0 GL* *incorporated in reach 1 base flow calculations
8	Provide a late spring fresh (>6,600 ML for 1 days) between October and December for native fish spawning NOTE: this fresh will only be delivered if there is 8 weeks of baseflows of around 1000 ML/day or Lower bank vegetation has not been inundated for less than two weeks. IVT pulse required to be delivered as the fresh. Total volume: 46 GL Passing Flows: 5 GL Unregulated: 0 GL IVT: 46 GL Assumed Ewater use 1 GL	Provide a late spring fresh (>6,600 ML for 1 days) between October and December for native fish spawning NOTE: this fresh will only be delivered if there is 8 weeks of baseflows of around 1000 ML/day or Lower bank vegetation has not been inundated for less than two weeks. 50% IVT contribution required be delivered as part of the fresh. Total volume: 46 GL Passing Flows: 5 GL Unregulated: 0 GL IVT: 23 GL Assumed Ewater use 46 GL	Provide a late spring fresh (>6,600 ML for 1 days) between October and December for native fish spawning NOTE: this fresh will only be delivered if there is 8 weeks of baseflows of around 1000 ML/day or Lower bank vegetation has not been inundated for less than two weeks. Unregulated contribution calculated on average of previous average years.. Assumes IVT baseflow is incorporated Total volume: 69 GL Passing Flows: 5 GL Unregulated: 115 GL IVT: 15 GL	Provide a late spring fresh (>6,600 ML for 1 days) between October and December for native fish spawning NOTE: this fresh will only be delivered if there is 8 weeks of baseflows of around 1000 ML/day or Lower bank vegetation has not been inundated for less than a week Assumes majority delivered though unregulated flows. Unregulated contribution calculated on average of previous wet years.. Total volume: 69 GL Passing Flows: 5 GL Unregulated: 115 GL IVT: 15 GL

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
			Assumed Ewater use 38 GL	Assumed Ewater use 38 GL
Teir 1 Volume required	141 GL	170 GL	292 GL	210 GL
Teir 2 actions				
5a	Provide 2026 winter fresh to reach 4-5 of (>7,300 ML for 4-5 days) up to 10,000 ML/day in June- July for channel forming, and platypus nesting cues. Smaller duration to reflect the dry conditions No IVT all from Eildon Total volume: 86 GL Passing Flows: 7 GL Unregulated: 0 GL IVT: 0 GL Assumed Ewater use 79 GL	Provide 2026 winter fresh to reach 4-5 of (>7,300 ML for 4-5 days) up to 10,000 ML/day in June- July for channel forming, and platypus nesting cues. Smaller duration to reflect the dry conditions No IVT likely all from Eildon Total volume: 86 GL Passing Flows: 7 GL Unregulated: 0 GL IVT: 0 GL Assumed Ewater use 79 GL	-	-
5b	Provide a winter fresh to reach 1 of >8,000 ML/d (or as high as possible) for 5-10 days between June and July to connect low lying wetlands and provide a nesting cue for platypus. Likely to coincide with the reach 4 and 5 fresh. Assumed Ewater use 0 GL	Provide a winter fresh to reach 1 of >8,000 ML/d (or as high as possible) for 5-10 days between June and July to connect low lying wetlands and provide a nesting cue for platypus. Likely to coincide with the reach 4 and 5 fresh. Assumed Ewater use 0 GL		
6	Provide an autumn fresh (>5,700 ML for 2-5 days) between March and May for lower bank vegetation reinvigoration and maintenance and/or fish migration outcomes.	Provide an autumn fresh (>5,700 ML for 2-5 days) between March and May for lower bank vegetation reinvigoration and maintenance and/or fish migration outcomes.		Provide an autumn fresh (>5,700 ML for 2-5 days) between March and May for lower bank vegetation reinvigoration and maintenance and/or fish migration outcomes.

Reaches 1, 4 and 5	Scenario 1 Extreme dry 99% POE	Scenario 2 Dry 90% POE	Scenario 4 Average 50% POE	Scenario 4 Wet 10% POE
	<i>NOTE: this fresh will only be delivered depending on flow and vegetation condition over the summer period</i> Assume IVT pulse is incorporated Total volume: 85 GL Passing Flows: 8 GL Unregulated: 0 GL IVT: 39 GL Assumed Ewater use 38 GL	<i>NOTE: this fresh will only be delivered depending on flow and vegetation condition over the summer period</i> Assume IVT pulse is incorporated Total volume: 85 GL Passing Flows: 8 GL Unregulated: 0 GL IVT: 39 GL Assumed Ewater use 38 GL		<i>NOTE: this fresh will only be delivered depending on flow and vegetation condition over the summer period but unlikely due to the high unregulated flows expected</i> Assumes majority delivered though unregulated flows. Unregulated contribution calculated on average of previous wet years. Assumes IVT baseflow is incorporated. Total volume: 99 GL Passing Flows: 10 GL Unregulated: 11 L IVT: 32 GL Assumed Ewater use 46 GL
Tier 2 Volume required	117 GL	170 GL	0 GL	46 GL
Tier 1 and 2 volume	256 GL	315 GL	292 GL	255 GL
Carryover requirements				
	Provide (carryover) for baseflow of 1000 ML/day in July to September (27/28) for fish and macroinvertebrate habitat and potential winter fresh Assumed Ewater use 30 GL	Provide (carryover) for baseflow of 1000 ML/day in July to September (27/28) for fish and macroinvertebrate habitat and potential winter fresh Assumed Ewater use 50 GL	Assumed Ewater use 0 GL	Assumed Ewater use 0 GL
Carryover Volume	30 GL	50 GL	0 GL	0 GL
Total volume	256GL	285 GL	292 GL	255 GL

+ Based on conversations with GMW

* CEWH may have the opportunity to trade additional environmental water allocations from the Murray to meet Goulburn demands

Appendix 2. Values icons used in the Seasonal Watering Plan

Environmental Values

Icon	Unique ID prefix	Value it represents
	A	Icon indicating an environmental objective in this system relates to frogs.
	B	Icon indicating an environmental objective in this system relates to waterbirds
	CN	Icon indicating an environmental objective in this system aims to maintain, increase, or enable carbon and nutrient cycling and connectivity.
	F	Icon indicating an environmental objective in this system relates to fish.
	G	Icon indicating an environmental objective in this system aims to maintain or strengthen physical stream characteristics
	MI	Icon indicating an environmental objective in this system relates to invertebrates.
	PR	Icon indicating an environmental objective in this system relates to platypus or rakali.
	T	Icon indicating an environmental objective in this system relates to turtles.
	TA	Icon indicating an environmental objective in this system relates to terrestrial animals.
	V	Icon indicating an environmental objective in this system relates to vegetation.
	WQ	Icon indicating an environmental objective in this system aims to maintain or increase water quality and/or conditions.

Traditional Owner

	Watering planned and/or delivered in partnership with Traditional Owners to support cultural values and uses
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Social, recreational, and economic values and uses.

	Icon indicating that environmental watering will also support water sports activities (e.g. canoeing, kayaking, rowing, swimming, water skiing)
	Icon indicating that environmental watering will also support waterbird-related recreational activities (e.g., twitching, birdwatching)
	Icon indicating that environmental watering will also support angling activities
	Icon indicating that environmental watering will also support peaks in visitation (e.g., camping, or other public activities on long weekends or school holidays)