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2023–24 Active Management Annual Evaluation and Review

Summary report on active management in the unregulated water sources of the Barwon–Darling, Gwydir and Macquarie–Bogan

June 2025



Acknowledgement of Country

The Department Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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1 Introduction

1.1 Background

In 2020, active management rules were implemented in the water sharing plans for the unregulated Barwon–Darling, Gwydir and Macquarie–Bogan water sources (see Appendix A – Where active management rules apply). The rules protect environmental flows that were previously available for extraction, replacing the need for temporary water restrictions.

The rules gave effect to the three procedures manuals for each water source which describe the operational procedures to protect active environmental water and reflect the principles and objectives outlined in the Active Management in Unregulated Rivers Policy (the policy). More information is available on the department's [Active management website](#).

To clarify, the 'active management rules' are not directly related to the practice of 'actively/adaptively managing' environmental water for environmental outcomes. In NSW, this practice is the role of the NSW Environmental Water Manager, a delegated responsibility of the NSW Conservation Programs, Heritage, and Regulation Group (CPHR), and the Commonwealth Environmental Water Holder (CEWH). From here on, 'active management', active environmental water (AEW) and 'actively managed flow events' refer only to the implementation of the active management rules/procedures.

1.2 Purpose

The purpose of the evaluation and review is to support learning and provide for improvements to active management procedures, in line with the adaptive management/continuous improvement approach. The evaluation and review did not include monitoring of environmental outcomes arising from the use of environmental water, since this is a responsibility of the CPHR Group and CEWH. Reviews on outcomes arising from the use of environmental water can be found on the following CPHR Group and CEWH websites:

- CPHR Group – [Planning and reporting on water for the environment](#)
- CEWH – [Flow-MER—Environmental Water Monitoring, Evaluation and Research](#)

The purpose of this document is to present the detailed, technical findings and recommendations of the fourth annual evaluation and review into the implementation of active management between 1

July 2023 and 30 June 2024 – equivalent to the fourth ‘water year’ of implementation. Previous annual reviews can be found on the department’s [Active management website](#).

1.3 Stakeholder consultation and contributors

The evaluation and review was conducted by the Water Group, with input from partner agencies WaterNSW, the Regional Delivery Division¹ of the Conservation Programs, Heritage, and Regulation Group (CPHR), and the Natural Resources Access Regulator (NRAR). The evaluation and review compiled information from partner agencies’ annual active management reports, and from feedback gathered from licence holders and peak stakeholder groups.

¹ Previously was referred to as BCS

2 Key Findings

2.1 WaterNSW followed procedures in 2023–24

WaterNSW followed the active management procedures for each event in 2023–24, with the exception of one minor deviation. Several other minor implementation issues also occurred.

The deviation was in the Barwon–Darling where WaterNSW have been adjusting access thresholds for a schedule 2 licence (WAL 33722) to account for AEW. This same deviation was reported in 2020–21 and 2022–23, with recommendation 18 created to resolve the inconsistencies between the mandatory and discretionary conditions, the procedure, and the water sharing plan. This recommendation should be resolved in 2025 as part of the remake of the water sharing plan for the Barwon–Darling unregulated river and subsequent procedure updates.

Some minor implementation issues occurred:

- Due to operator error, the announcement for 28 December was not published. The announcement for the prior day applies when this occurs.
- On 21 Dec 2023, A class access was announced instead of B class access for the Bourke to Louth management zone due to a rounding issue with WaterNSW's operational model. WaterNSW contacted active customers to notify them of the issue.
- During 2024 the Water Group identified that a permanent trade had not been reflected in the Lower Macquarie operational model. WaterNSW have reviewed their processes to ensure that permanent trades are identified, and operational models are maintained.
- WaterNSW have not yet published information on flow and loss forecasting methods, as required by the procedure manuals (also tracked as recommendation 9 through the project to implement the [Claydon Review](#) recommendations.). WaterNSW have drafted this information and when finalised it will be published on their WaterInsights portal.

2.2 Procedures were largely effective at protecting active environmental water

Between 1 July 2023 and 30 June 2024, the active management procedures provided regulatory protection to 239 gigalitres (GL) of active environmental water (AEW) in the unregulated Barwon–Darling and Macquarie–Bogan water sources. Protection was applied across:

- 2 events in the Barwon–Darling, which protected 64.4 GL through Barwon-Darling entitlements as well as 31.5 GL² arriving from upstream regulated valleys (see Figure 1).
- 2 events in the Macquarie–Bogan, which protected 156.5 GL for environmental outcomes in the Macquarie Marshes and the Lower Macquarie unregulated river and some water subsequently for the Barwon-Darling.

As a result of the protection, 58.9 GL active environmental water arrived at Wilcannia and 44.8 GL was estimated to arrive at Lake Wetherell. Note however that the current accounting method is known to under-estimate the AEW arriving at Lake Wetherell. MDBA are considering alternate accounting options as part of the trial arrangements to protect AEW through to the southern Basin.

The active management procedures were not applied in the unregulated Gwydir. Active management only applies to held environmental water (HEW) deliveries in the Upper Gingham, Lower Gingham and Mallowa creeks. There were some HEW deliveries to these areas, however, they only resulted in low flows which were either physically not accessible to pumps or the flow was already protected by access thresholds on unregulated river access licences.

A summary of the events and the total volumes protected is shown in Figure 1. Further detail can be found in Appendix B.

In late 2023 a procedure was agreed to between Queensland, the Water Group and WaterNSW to protect QLD HEW from the Border Rivers regulated system into the Barwon–Darling, since the enabling mechanism were already in place (i.e. the cross-border accounting method and active management in the Barwon-Darling). The procedure required QLD to notify WaterNSW prior to the water arriving, however, QLD did not provide the required notification in time for two events to be protected. The agreed procedure has since been re-confirmed with Queensland. Water Group have also developed an automated notification method so that WaterNSW is notified when QLD enter the HEW data into the environmental water portal.

A procedure to account for and protect QLD HEW reaching the Barwon–Darling from the Intersecting Streams is in development and will be finalised in 2024-25, with the aim of an implementation start date of 1 July 2025, subject to agreement with WaterNSW.

² 13.4 GL of the 31 GL from upstream water sources is from the Macquarie, already accounted for in the 156 GL at the start of the Macquarie Marshes hence the total is $64.4 + 156.5 + 31.5 - 13.4 = 239$ GL. Note that in previous annual review reports this double counting of Macquarie HEW inflows to the Barwon-Darling was not removed from the total protection reported.

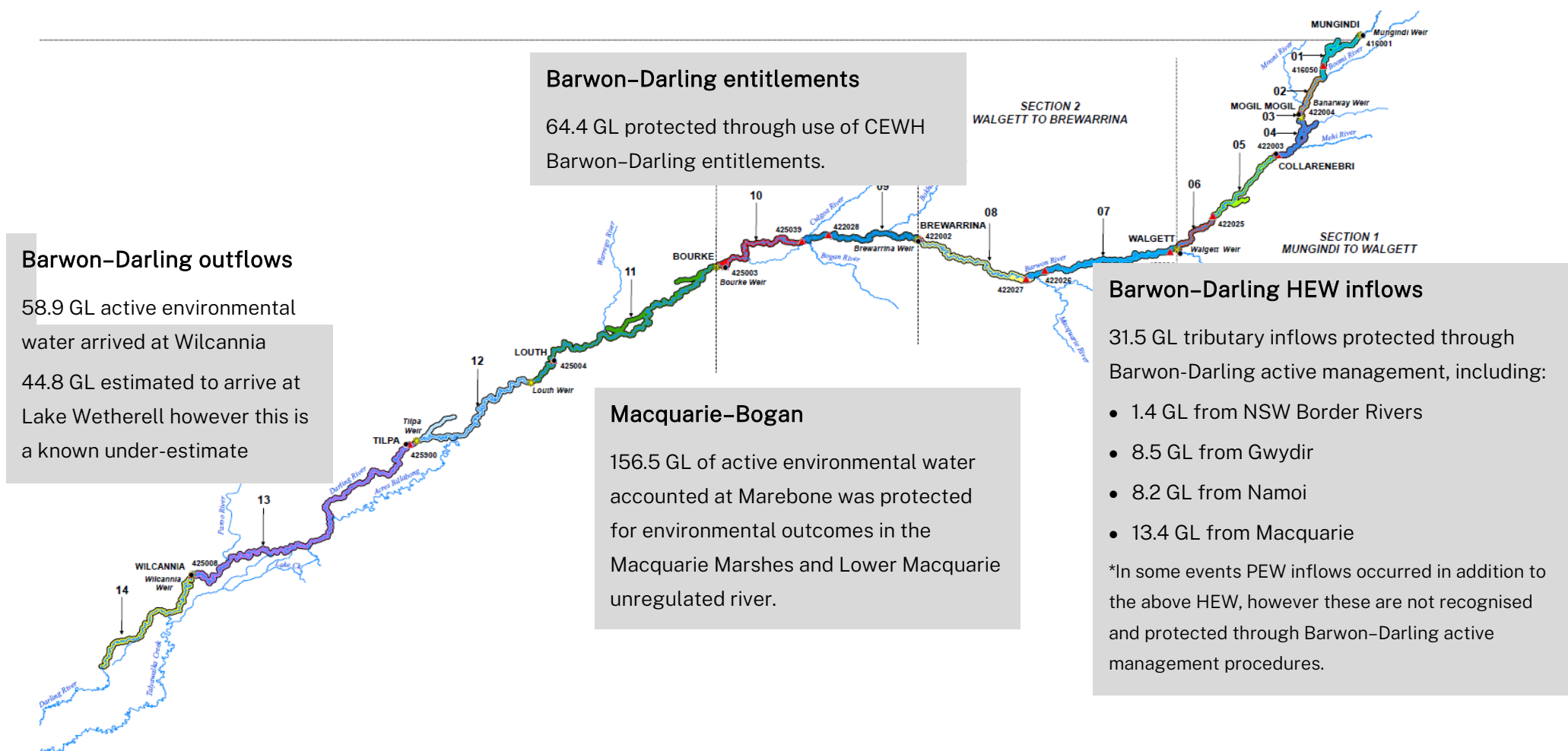


Figure 1. Summary of volumes protected under active management procedures in 2023-24

2.3 Forecasting uncertainty is still causing some impacts but mismatch has reduced

Active management implementation relies on flow forecasting to make access announcements and to quantify the volume of AEW that will require protection before flows arrive in any management zone. Due to the inherent variability in natural river systems, forecasting is inexact, and actual flows may fall short or exceed forecast flows. Forecasting, therefore, remains the primary operational risk in implementing active management. The risk being that either other water users' access is impacted unintentionally or HEW is not sufficiently protected. Specific issues contributing to flow forecasting uncertainty raised in this review include reduced capacity for upstream operators to forecast end-of-system flows during flood periods, challenges forecasting local rainfall and the impact of expressions of interest (EOIs) which exceed intentions to take.

The 'mismatch' assessment reviews the volumes that could have been announced based on gauged flows, versus how much was announced based on forecasted flows. A negative mismatch means a lesser volume was announced as being available to access than could have been announced based on gauged flows. A review of mismatch totals found WaterNSW's measures to manage the risk to be appropriately conservative for both water available for consumptive use and for HEW. In the Barwon-Darling, the overall mismatch was -0.9% for water available to consumptive licence holders and -2.5% for HEW licences in the Barwon-Darling. The difference between consumptive and HEW mismatch is purely an outcome of where the licences are held, as forecasting in some reaches is more difficult than in others. Larger mismatches have occurred in prior years due to the difficulty forecasting inflows and EOIs that did not reflect actual intention to extract. For example, in 2022-23 there was a -13% mismatch for consumptive licence holders. Refer to previous annual review reports for further details on previous mismatch values. The reduction for 2023-24 is due to:

- fewer issues forecasting inflows
- WaterNSW making modifications to their model where EOIs are consistently higher than actual take.

It is important to note that both WaterNSW and Water Group have made continued efforts to encourage Barwon-Darling water users to enter accurate EOIs, as they are still the most practical way to avoid mismatch. Other planned improvements, such as sub-daily announcements, may also partially help address overall mismatch.

In the Macquarie the overall mismatch for consumptive licences was -2%. There were no EOIs to protect HEW in the Macquarie, and therefore no mismatch data.

A summary of mismatch totals across zones is presented in Appendix C.

2.4 Telemetry delays have impacted compliance monitoring

The Natural Resources Access Regulator (NRAR) has broad capability and experience in monitoring environmental flow events for compliance with licence obligations. NRAR can, and regularly does, use real time and historic spatial data as well as field personnel to undertake compliance monitoring activities. However, NRAR did not monitor any of the specific active management events that occurred in 2023–24. This means that there is uncertainty around the level of water user compliance with active management procedures. There are existing recommendations for enabling efficient compliance assessments in the future (R.25 and R.26) but progress on those recommendations has been limited by delays in access to telemetered extraction data.

NRAR are progressing development of a system to provide timely identification of possible breaches of active management procedures (R.25). However, the lack of daily telemetered data has hampered progress. NRAR have now finalised compliance monitoring dashboards for the Barwon-Darling that will inform enforcement activities.

WaterNSW have not yet completed work required to first assure telemetered usage data quality and then enable that data to be imported to the WaterNSW Water Accounting System (WAS) database. WaterNSW have recently made improvements to the data availability in WAS. Daily data is essential to enable active management compliance monitoring.

WaterNSW and the Water Group are working to identify and resolve issues with metering and telemetry through the [non-urban metering review](#).

2.5 There are three new issues but no new recommendations

Only three new issues have been raised by licence holders. There are no new recommendations at this stage. Issue 1 will be discussed with licence holders as part of the procedure updates in 2025. WaterNSW already have a workplan for issue 3.

1. Management of HEW in zone 4 in the Barwon-Darling

Water users contacted the CEWH in February 2024 about their inability to take as the CEWH had licenses activated upstream which were protecting flows via active management in downstream areas. The other water users were concerned that the level of protection prevented their access to flows, as IDECs as set out by the Barwon-Darling water sharing plan for some users are greater than the rate of extraction prior to water recovery. This is because the IDEC is larger than previously approved and installed pump capacities. Downstream water users feel that this is inequitable.

CEWH chose to reduce the EOI for protection on the CEWH Zone 2 and Zone 4 licences during this event. This issue will be discussed as part of procedure updates in 2025.

2. Expression of interest period to protect

CPHR have reported that the requirement to submit an expression of interest to protect impacts on their ability to respond to events, especially if they fall on or just before a weekend.

All licence holders are required to submit expressions of interest by 9 am on the day before water is intended to be taken or protected. This allows WaterNSW time to complete the required calculations and make an announcement.

3. Reminders to update EOI

Customers sometimes miss out on pumping opportunities if they do not maintain their EOI and it expires. Customers have raised this issue previously and it was noted in both the 2021-22 and the 2022-23 annual evaluation and review reports. However, it is noted here again that WaterNSW now plan to include an automatic reminder with daily announcement notification. This improvement will be included during the next major active management system upgrade.

3 Next steps

Updates to water sharing plans, procedure manuals and other associated operations will occur in 2025 to address many of the remaining recommendations. Previous reviews identified improvements required for procedures or implementation of procedures. In some cases, the recommendations relate to water sharing plans or the Active Management in Unregulated Rivers Policy, and therefore require longer timeframes to be addressed – that is, as part of scheduled the remake or amendment deadlines for the water sharing plans (Macquarie-Bogan remake due 1 Jul 2025), or as part of the policy review due in February 2026.

A total of 49 recommendations have been made in previous reviews. Of these, 17 recommendations have been completed and 19 have progressed. Several of the recommendations should be resolved or progressed during 2025:

- Some recommendations will be resolved through proposed updates to the Barwon-Darling and Macquarie-Bogan unregulated river water sharing plans. These are due to be remade on 1 July 2025.
- Updates to the Barwon-Darling and Macquarie-Bogan active management procedures are in the process of being drafted to address several recommendations. Stakeholder consultation on the updates will occur in 2025.
- One recommendation related to the active management policy review that is currently in the project planning stage. The policy review will progress in 2025 and is due in February 2026.

See Appendix D for further information on all remaining recommendations.

Licence holders and peak stakeholder groups will be consulted on the changes to water sharing plans, the Active Management in Unregulated Rivers Policy or any of the three active management procedures manuals and their associated operations. This will include meetings with affected stakeholders during 2025 to share knowledge, explore issues and identify solutions.

Several of the recommendations are delayed due to inadequate access to telemetered usage data. As noted above, WaterNSW and the Water Group are working to identify and resolve issues with metering and telemetry through the non-urban metering review.

Water Group are also progressing the Intersecting Stream HEW loss accounting arrangements that enables QLD HEW, flowing via the Intersecting Streams, to be protected into the Barwon–Darling under the active management procedures. We are aiming to have this procedure implemented in 1 July 2025, subject to WaterNSW ability to implement. The Barwon–Darling procedures manual already allows for protection of HEW from the Intersecting Streams once the Department agrees to

a method, however the manual will be updated to ensure that the method of protection is clear. The Water Group have held an initial engagement with Barwon–Darling water users’ and their representatives, and will meet again prior to implementing the arrangement.

The Water Group are also working towards a trial to protect AEW inflows into and through Menindee Lakes. These inflows have previously been unprotected and, under current arrangements, the inflows contribute to the allocation pool for the Lower Darling (including for HEW entitlements), as well as to the shared Murray resource (when Menindee Lakes are available to the MDBA). The trial aims to recognise and protect the AEW so that it can be used for connectivity to the southern Basin and for other environmental purposes.

4 References

Claydon, G. 2021. Independent Assessment of the Initial Implementation of the Resumption of Flows Rule, IDECs and Active Management in the Barwon–Darling: 01 December 2020 to 31 March 2021, Final report by independent reviewer Greg Claydon, commissioned by DPE-Water, 14 September 2021.

DPE (NSW Department of Planning and Environment) 2020. Active Management in Unregulated Rivers Policy (DOC19/50437), DPE–Water, February 2020

DPE (NSW Department of Planning and Environment) 2020. Active Management Procedures Manual for the Barwon–Darling Unregulated Rivers Water Source (INT20/32976), December 2020

DPE (NSW Department of Planning and Environment) 2020. Active Management Procedures Manual for the Gwydir Unregulated Rivers Water Source (INT20/57481), December 2020

DPE (NSW Department of Planning and Environment) 2020. Active Management Procedures Manual for the Macquarie–Bogan Unregulated Rivers Water Source (INT20/32978), December 2020

DPE (NSW Department of Planning and Environment) 2021. Hydrometric Improvement Plan (DOC21/162984), DPE–Water, November 2021

DPE (NSW Department of Planning and Environment) 2021. Resumption of flows rule in the Barwon–Darling Unregulated River Water Source (PUB19/434), DPE–Water, March 2021.

Appendix A – Where active management rules apply

Table 1. Where active management rules apply in NSW

Unregulated Water Source	Unregulated water sharing plan management zone	Figure
Barwon–Darling	All management zones	Figure 7
Gwydir	Upper Gingham Watercourse Management Zone Lower Gingham Watercourse Management Zones Mallowa Creek Water Source	Figure 8
Macquarie–Bogan	Lower Macquarie River Upstream Management Zone Lower Macquarie Downstream Management Zones Gum Cowal Management Zone Lower Marthaguy Creek Management Zone	Figure 9

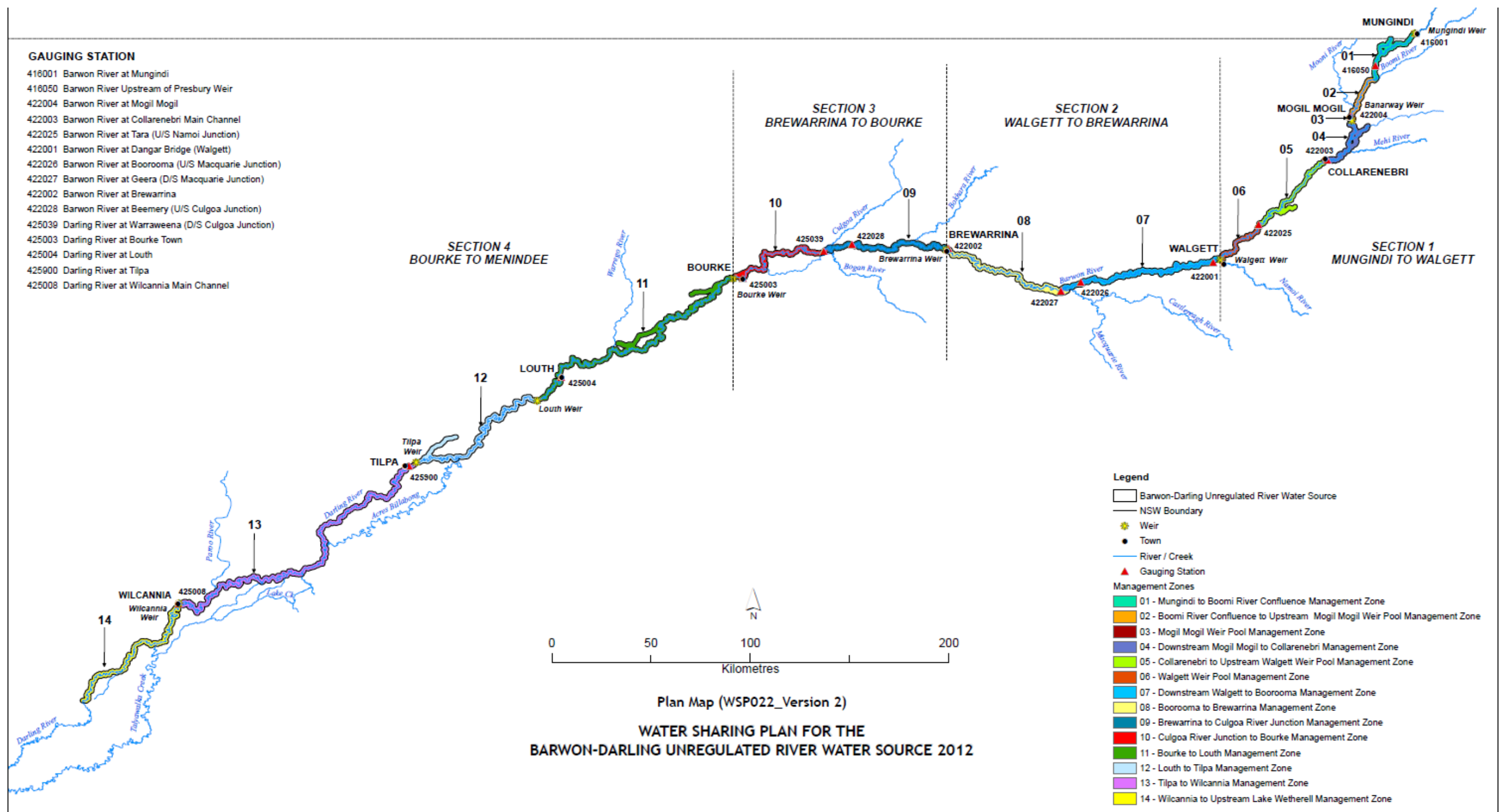


Figure 2. Active management rules apply across all fourteen-management zone in the Barwon–Darling Unregulated River Water Source

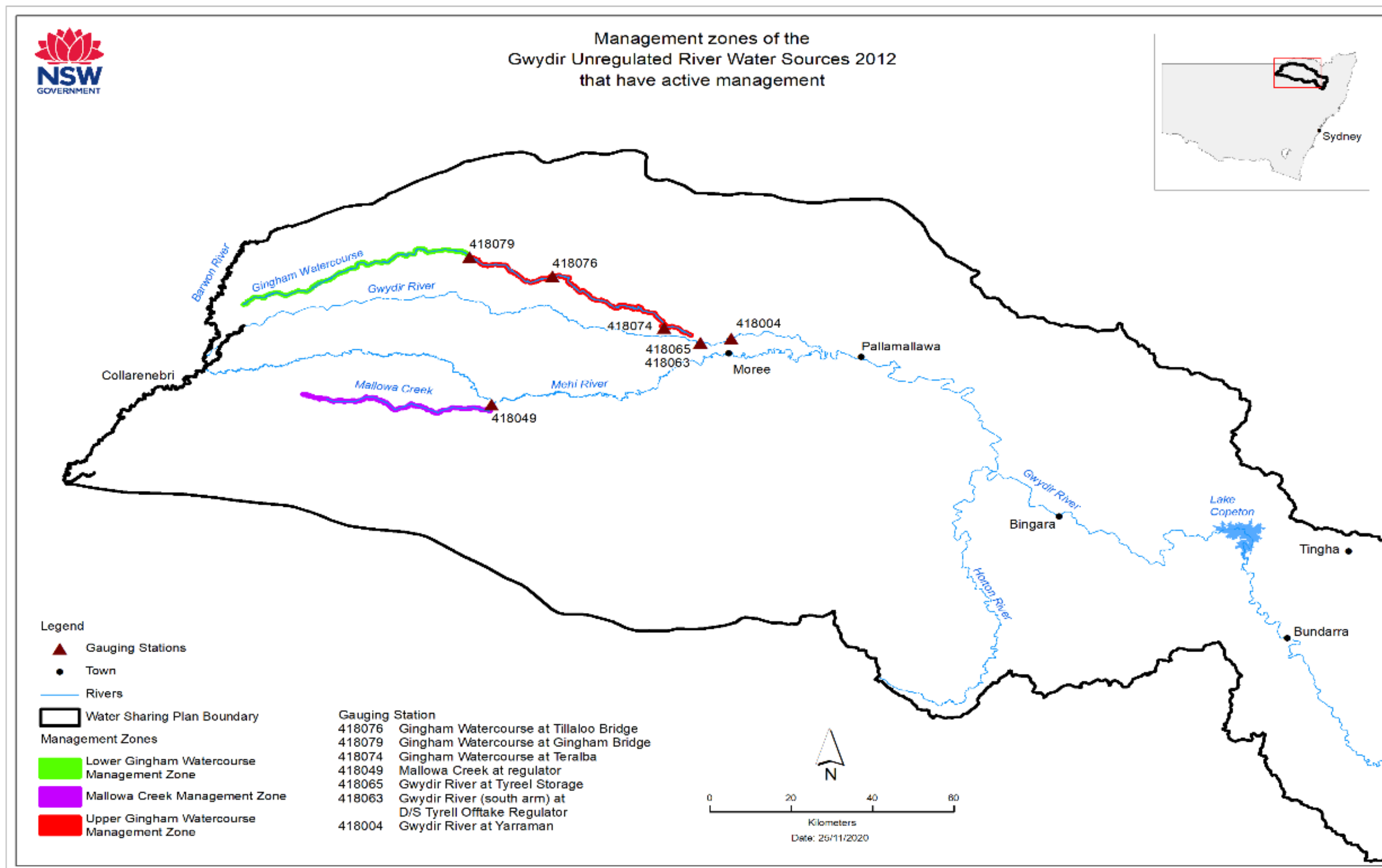


Figure 3. The three management zones where active management rules apply in the Gwydir Unregulated River Water Sources

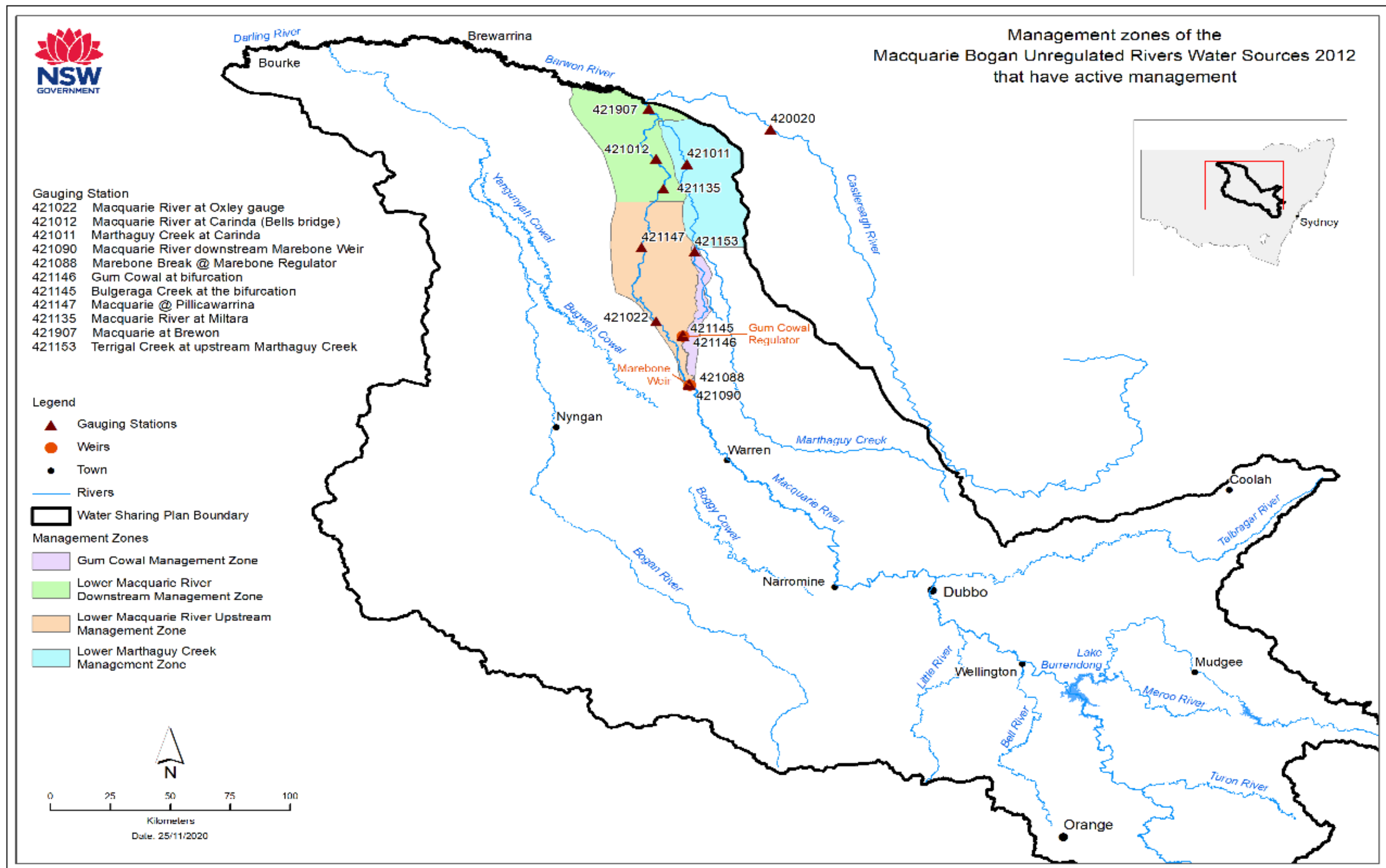


Figure 4. The four management zones where active management rules apply in the Macquarie–Bogan Unregulated River Water Source

Appendix B – Actively managed events in 2023–24

4.1 Barwon–Darling

There were 2 events in the Barwon–Darling Unregulated River Water Source in the 2023–24 water year (Table 2). Key features of the event were:

- The first event was the tail end of the prior year’s event. There were only 2 days where flows were in transit from Wilcannia to Lake Wetherell.
- AEW tributary inflows first arrived from the Macquarie on 8 September 2023. AEW arrived from Namoi, Gwydir and Border valleys a few weeks later.
- Around 31,476 ML arrived from upstream regulated valleys (see Figure 1 for more detail)
- A further 64,446 ML was protected through Barwon–Darling held environmental water (HEW) entitlements.

AEW was sometimes a significant portion of total flow in the Barwon–Darling (Figure 5 to Figure 7).

The environmental objective of event 2 was connectivity and providing small and large freshes. To assess the degree to which active management procedures enable environmental water holders to achieve their objectives we have sought the following advice:

- WaterNSW provided a qualitative indication of the risk that AEW would have been extracted if active management was not in place.
- BCS provided a qualitative indication of how important the addition of AEW was to achieve environmental objectives.

This advice is summarised in Table 2. BCS advised that AEW had a major contribution to achieving environmental objectives in 2023–24. If active management was not in place in 2023–24 there was a low to medium risk that AEW would have been extracted depending on the management zone. This advice was based on overall pumping being less than announced volumes. This assessment can be refined in future when telemetry is more widely available.

Further information on environmental outcomes can be found on the NSW DCCEEW–BCS Group and CEWH websites as noted in section 1.2.

Table 2. Description of active management undertaken in the Barwon–Darling in 2023–24

Date commenced & finished	Volume of AEW protected (ML)*	AEW @ Wilcannia (ML)	AEW @ Lake Wetherell (ML)**	Risk of AEW being extracted if active management not in place.	Environmental Objectives	How important was the AEW to achieving environmental objectives?
1 Jul - 2 Jul 2023	0	0	196	Low in zone 14, otherwise none.	Connectivity to improve water quality	N/A
8 Sep 2023 – 29 Jun 2024	95,922	58,871	44,595	Low to medium depending on the zone***.	Connectivity, small freshes and large fresh	Major contribution

* Includes AEW from upstream tributaries and Barwon-Darling HEW protection

** Lake Wetherell inflows are known to be under-estimated due to difficulties estimating losses

*** Low risk where there are no consumptive licence or limited extraction activity in this zone. Medium risk where consumptive EOI is in place, but overall extractions are significantly less than the daily distributed volumes.

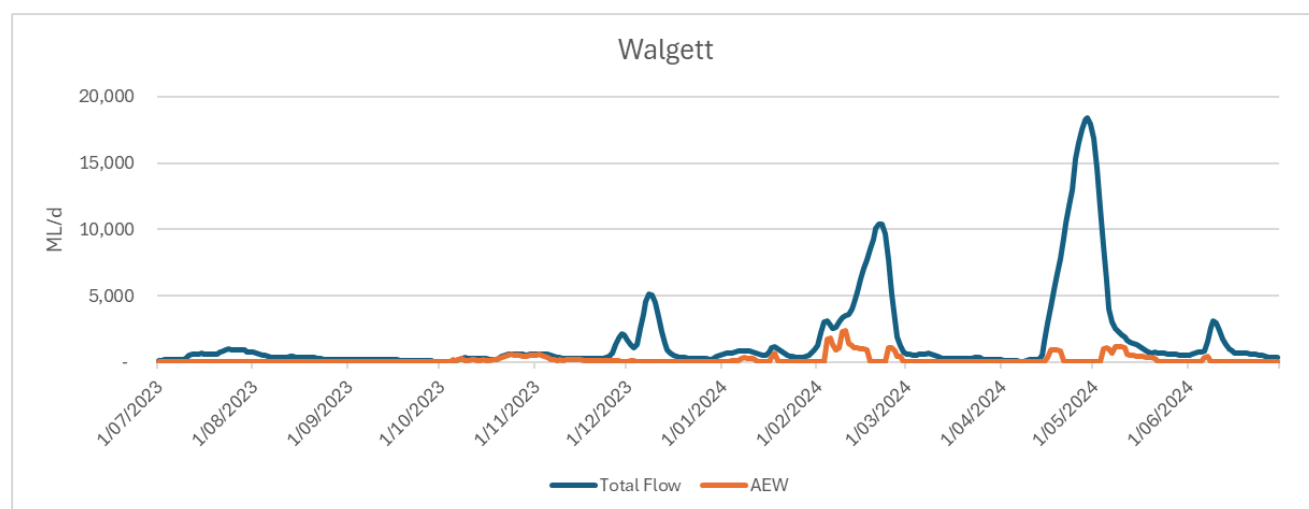


Figure 5. Barwon–Darling total flow (blue line) and active environmental flows (orange line) at Walgett, Jul 23 – June 24

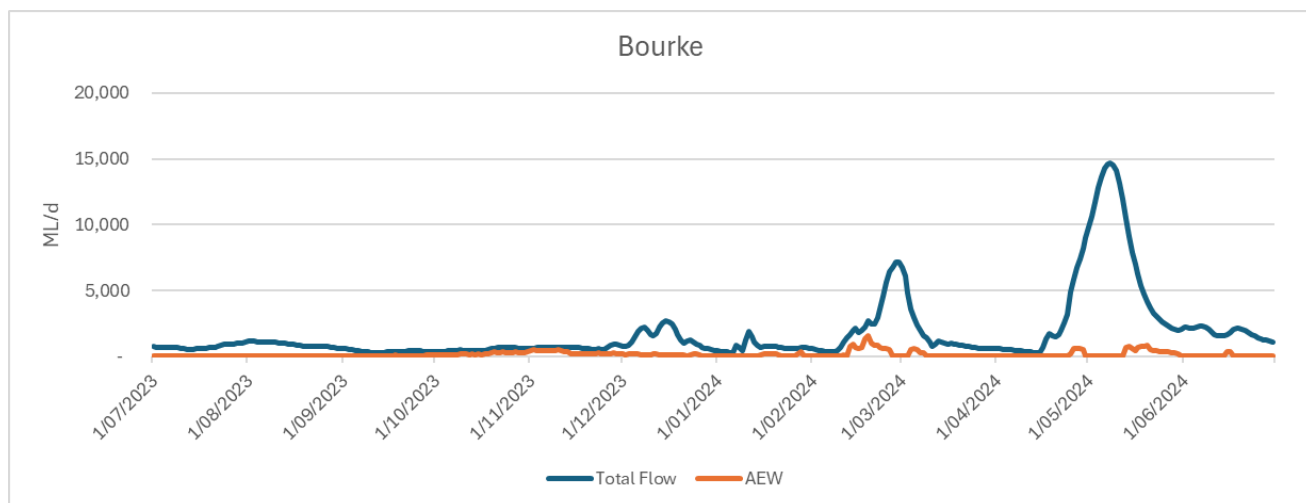


Figure 6. Barwon-Darling total flow (blue line) and active environmental flows (orange line) at Bourke, Jul 23 – June 24

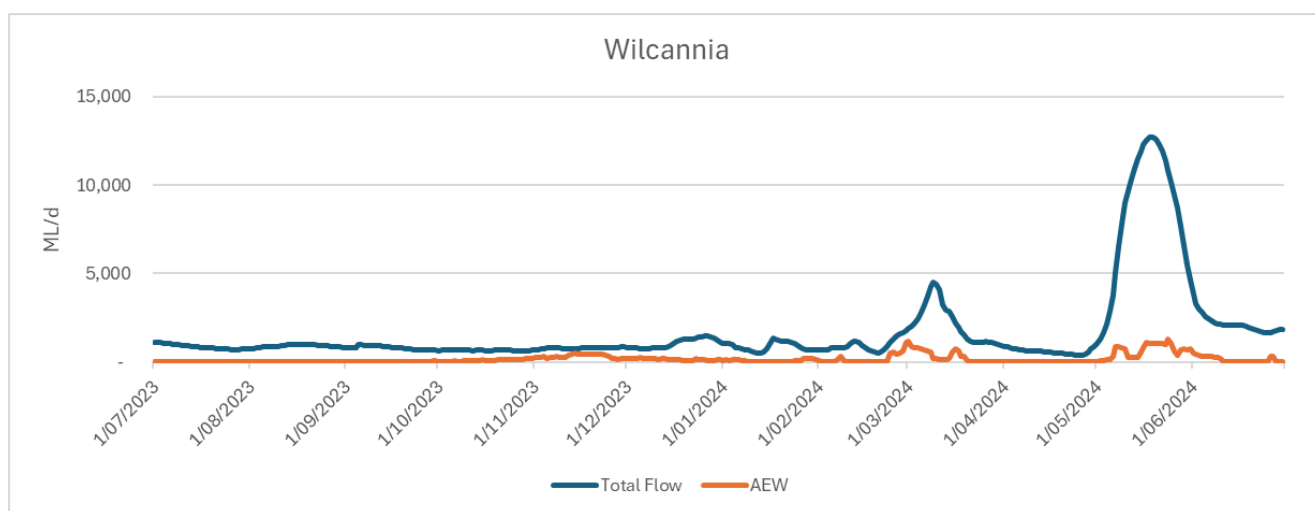


Figure 7. Barwon-Darling total flow (blue line) and active environmental flows (orange line) at Wilcannia, Jul 23 – June 24

The resumption of flows (RoF) rule was not triggered in 2023–24 (Table 3).

Table 3. History of all resumption of flows events

Event #	Start date (any triggers activated)	End date (all triggers relaxed)	Total volume protected (ML)	Total volume that may have been extracted without RoF (ML)
#1	12 January 2021	29 January 2021	8,000 ³	6,000 ⁴

³ WaterNSW 2021. [Resumption to Flows event report February 2021](#). Accessed online 8 August 2023

⁴ WaterNSW 2021. [Resumption to Flows event report February 2021](#). Accessed online 8 August 2023, sum of expressions of interest

4.2 Macquarie–Bogan

There were 2 AEW events in the Macquarie–Bogan Unregulated River Water Source in the 2023–24 water year (Table 4, Figure 8 and Figure 9). Key features of the events were:

- There was a combination of planned environmental water from the Macquarie environmental water allowance - active sub-account and general security HEW use.
- Event 1 was a long event with 111 days of AEW at Marebone. Most of the flow during this event was from AEW (Figure 8).
- Event 2 was a much smaller and shorter event with 13 days of AEW at Marebone.
- A total of 156 GL of AEW arrived at Marebone from the two events, and was subject to protection in the unregulated Macquarie Marshes and Lower Macquarie River reaches between the end of the Macquarie regulated system (various points) and the Barwon River.
- 26 GL of AEW arrived at the Barwon River, and of this 13.5 GL (52%) was subject to further protection in the Barwon River, being held environmental water.

The environmental objective of both events included wetland inundation and improved connectivity. To assess the degree to which active management procedures enable environmental water holders to achieve their objectives we have sought the following advice:

- WaterNSW provided a qualitative indication of the risk that AEW would have been extracted if active management was not in place.
- BCS provided a qualitative indication of how important the addition of AEW was to achieve environmental objectives.

This advice is summarised in Table 4. BCS advised that AEW had a major contribution to achieving environmental objectives in 2023–24. If active management was not in place in 2023–24 there was a high risk that AEW would have been extracted.

Further information on environmental outcomes can be found on the NSW DCCEEW–BCS Group and CEWH websites as noted in section 1.2.

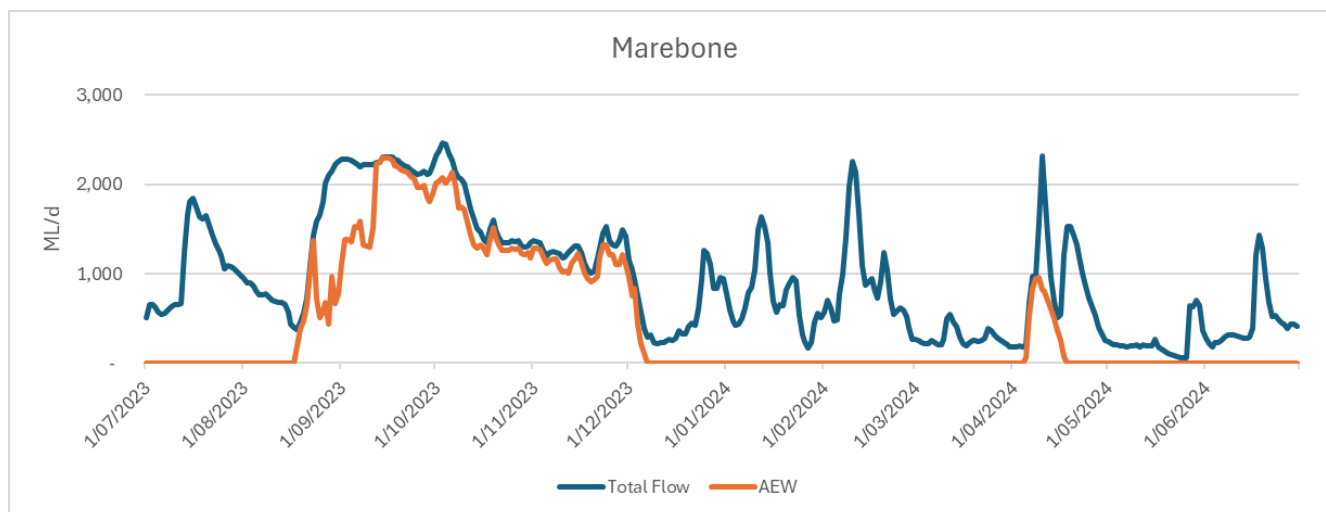


Figure 8 Total flow (blue line) and active environmental flows (orange line) at Marebone, Jul 23 – June 24

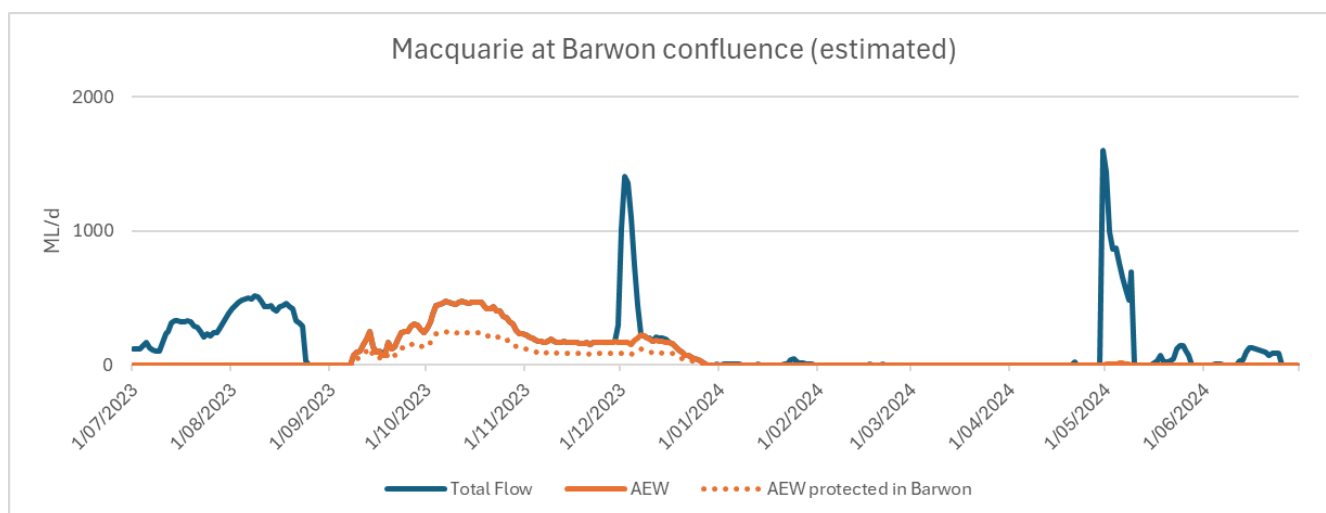


Figure 9 Macquarie– Castlereagh total flow (blue line) and active environmental flows (orange line) estimated at the Barwon-Darling junction, Jul 23 – June 24. Note that only HEW inflows are protected in the Barwon-Darling (orange dotted line).

Table 4. Description of active management undertaken in the Macquarie–Bogan in 2023–24

Date commenced & finished	AEW Macquarie River @ Marebone Weir (ML)	Volumes of AEW at the end of system ⁵ (ML)	Risk of AEW being extracted if active management not in place.	Environmental Objectives	How important was the AEW to achieving environmental objectives?
1 Aug - 7 Dec 2023	149,052	25,984 About 52% was from HEW (GS) and the remainder from EWA2 (Active EWA)	High	Marshes wetland inundation, Lower Macquarie connectivity	Major contribution to connectivity objectives
7 Apr -18 Apr 2024	7,424 About 52% was from HEW (GS) and the remainder from EWA2	46 About 52% was from HEW (GS) and the remainder from EWA2 (Active EWA)	High for the upstream management zone, otherwise Low.	Native fish connection and Marshes inundation	Major contribution to connectivity objectives

⁵ Note that this includes EWA2 which is not recognised as AEW in the Barwon Darling and therefore does not have further protection under the Barwon-Darling active management procedures

Appendix C – Mismatch analysis by event and zone

WaterNSW provide information on flow events in their annual reports, summarising the difference (mismatch) between the announced volume made available to licence holders based on forecasts flows, and the volume that would have been made available based on gauged flows. This information helps inform a continuous improvement approach.

Forecasting for inflows, losses and extractions sometimes results in a mismatch. The mismatch is calculated as a percentage of the announced volume and is summarised in Table 5 to Table 7. A negative mismatch means that less water was announced than could have been based on final gauged flows (and vice-versa).

In the Barwon-Darling, the mismatch for consumptive and HEW licences is reported separately. There was no allocation to unregulated HEW in the Macquarie as there were no EOLs for HEW protection.

Differences in mismatch across zones reflect differences in forecasting difficulty. Consumptive and HEW licences are treated the same and differences reflect the different forecasting issues in each zone in each period that EOLs were in place. Mismatches across zone and events were all less than 10%.

Table 5. Consumptive available water mismatch by zone and event – Macquarie

	Event 1		Event 2	
Section	Announced	Mismatch as % announced	Announced	Mismatch as % announced
Gum Cowal	412	0%	0	n/a
Macquarie US	350	0%	0	n/a
Macquarie DS Sub zone 1	5,866	-2%	0	n/a
Sub zone 2	4,133	-2%	0	n/a
Sub zone 3*	-	n/a	0	n/a
Sub zone 4	8,718	-3%	2170**	n/a

	Event 1		Event 2	
Lower Marthaguy	150	0%	0	n/a

*No active licences in this management zone

**Primarily water from Barwon-Darling breakout and backflow and was estimated. No gauges to derive mismatch volume.

Table 6. Consumptive available water mismatch by zone – Barwon-Darling⁶

	Event 1		Event 2	
Section	Announced	Mismatch as % announced	Announced	Mismatch as % announced
Zone 1	n/a	n/a	49,341	-3%
Zone 2	n/a	n/a	9,525	-7%
Zone 3	n/a	n/a	-	n/a
Zone 4	n/a	n/a	52,531	0%
Zone 5	n/a	n/a	64,165	2%
Zone 6	n/a	n/a	19,461	0%
Zone 7	n/a	n/a	34,431	5%
Zone 8	n/a	n/a	98,628	-2%
Zone 9	n/a	n/a	39,706	-1%
Zone 10	n/a	n/a	147,851	-3%
Zone 11	n/a	n/a	86,294	2%
Zone 12	n/a	n/a	6,263	-2%
Zone 13	n/a	n/a	-	n/a
Zone 14	n/a	n/a	-	n/a

⁶ Event 1 is not included as none announced

Table 7. HEW available water mismatch by zone and event – Barwon–Darling

Section	Event 1		Event 2	
	Announced	Mismatch as % announced	Announced	Mismatch as % announced
Zone 1	n/a	n/a	0	n/a
Zone 2	n/a	n/a	6,099	-3%
Zone 3	n/a	n/a	0	n/a
Zone 4	n/a	n/a	39,413	-7%
Zone 5	n/a	n/a	193	-2%
Zone 6	n/a	n/a	0	n/a
Zone 7	n/a	n/a	0	n/a
Zone 8	n/a	n/a	1200	-2%
Zone 9	n/a	n/a	0	n/a
Zone 10	n/a	n/a	0	n/a
Zone 11	n/a	n/a	17,268	9%
Zone 12	n/a	n/a	0	n/a
Zone 13	n/a	n/a	273	-4%
Zone 14	n/a	n/a	0	n/a

Appendix D – Remaining recommendations

Table 8. Remaining active management annual evaluation and review recommendations

REF	Review recommendations	Agency	Status
R.1	The Water Group to enable sub-daily (corrective) announcements in the unregulated Barwon–Darling water source, through water sharing plan, procedures manual and operational changes, and consider the implications for compliance monitoring.	Water Group & WaterNSW	underway – published procedure update planned 2025
R.2	The Water Group and WaterNSW to make the required changes to the Barwon–Darling Water Sharing Plan and procedures manual and develop systems to enable temporary trade of IDECs.	Water Group	underway and planned to be in place in the 2025–26 water year
R.3	The Water Group to consider revising wording for access thresholds in the Barwon–Darling Water Sharing Plan (49A, Table B) from "more than" to "equal to or more than".	Water Group	underway – WSP update planned for 1 July 2025
R.4	The Water Group and WaterNSW to revise trading rules between management zones in the Macquarie–Bogan to manage the impact of trading in/out entitlements with different access thresholds.	Water Group & WaterNSW	underway – WSP update planned for 1 July 2025
R.6	The Water Group to change the ‘no flow share’ procedure (Procedure 19 in the Barwon–Darling procedures manual) to prevent licence holders who did not submit an EOI from extracting water.	Water Group & WaterNSW	underway – will be discussed with licence holders in 2025
R.7	The Water Group and WaterNSW to complete investigations into travel times greater than one day within a management zone and their impact on licence holders in the Macquarie–Bogan.	Water Group & WaterNSW	underway – WSP update planned for 1 July 2025

REF	Review recommendations	Agency	Status
R.8	The Water Group to advise licence holders in the unregulated Barwon–Darling, Gwydir and Macquarie–Bogan water sources on the maximum period that can be entered for an EOI.	Water Group	This will be discussed with stakeholders as part of the 2025 procedure update. Several discussions have already occurred via the Barwon–Darling CAG.
R.9	The Water Group to include wording (based on any relevant WSP clauses) in the three procedures manuals relating to the period an announcement applies in the case of a system outage and should clarify that the announcement covers both the flow class and flow share.	Water Group	underway – published procedure update planned 2025
R.10	The Water Group to amend the three procedures manuals to require WaterNSW to provide a basic summary of active management events in the previous 12 months to 30 June to agencies by 31 August each year.	Water Group	underway – published procedure update planned 2025
R.12	The Water Group to revise the Barwon–Darling procedures manual to clarify that multiple flow share announcements and flow class announcements (each of 24-hour duration) during times of "high flow" may be announced on one day ("high flow" to be defined) so long as WaterNSW's operational practice of daily accounting is followed.	Water Group	underway – published procedure update planned 2025
R.15	The Water Group to further investigate measures to protect AEW in Barwon–Darling backflows from extraction in the Macquarie, and then implement these measures.	Water Group	underway – published procedure update planned 2025
R.18	The Water Group and WaterNSW to first explore the rationale behind the inclusion of Procedure 15.3 and Note 5 and then revise the procedure, the Barwon–Darling WSP, and the mandatory and discretionary conditions for Schedule 2 and 2A licences in the WSP to ensure consistency between all three instruments.	Water Group & WaterNSW	underway – WSP update planned for 1 July 2025 and procedure update 2025

REF	Review recommendations	Agency	Status
R.20	WaterNSW to consider including a graphical representation of AEW on the WaterInsights portal and implement where practical.	WaterNSW	Complete for the <u>Barwon–Darling</u> . In progress for the Macquarie.
R.21	WaterNSW to pursue opportunities to improve flow forecasting in the Barwon–Darling (in line with Claydon Review Recommendation 2 and 3).	WaterNSW	underway
R.22	The Water Group and WaterNSW to make changes to the Gwydir procedures manual to reflect the practices of not announcing access when normal conditions apply in the Gwydir and only announcing on days when active management rules apply.	Water Group & WaterNSW	not started
R.23	The Water Group to conduct an analysis on the likelihood of an issue (issue 12 in Table 5 of the full report - equitable sharing) between two licence holders in the Macquarie–Bogan.	Water Group	underway – published procedure update planned 2025
R.25	WaterNSW and NRAR to explore options for dynamic (near real-time) comparison of extraction data and daily access announcements.	WaterNSW & NRAR	underway
R.27	WaterNSW to change operational systems to prevent full IDEC announcement for licences that did not submit an EOI when the rules allow this.	WaterNSW	not started – waiting on R.6
R.28	The Water Group to review interim measures used by WaterNSW to address issues with Tara gauge and either endorse the measures or propose new measures.	Water Group	underway
R.29	WaterNSW to identify extraction points along management zones in the Barwon–Darling and incorporate into the forecasting model to improve flow forecasts in the downstream zone.	WaterNSW	not started - Waiting on telemetry data.
R.30	The Water Group to change procedures to require environmental water licence holders to (a) nominate the end of the upstream regulated system as the delivery location when the water is then to be actively managed in	Water Group & WaterNSW	Complete Orders are sometimes placed at other locations, however

REF	Review recommendations	Agency	Status
	the Barwon–Darling, and to (b) place such orders via iWAS.		WaterNSW apply losses to estimate the AEW at the end of the system.
R.32	WaterNSW to make access announcements from all prior water years publicly available through their WaterInsights portal.	WaterNSW	Complete
R.34	WaterNSW to replace/relocate Tara gauge and Water Group to update references to the gauge in the Barwon–Darling WSP and procedures manual.	WaterNSW	underway
R.39	The Water Group to notify licence holders of current trading rules between zones with different access thresholds.	Water Group	underway – WSP update planned for 1 July 2025
R.41	The Water Group to develop better information products to communicate how active management rules protect HEW through the system and impact hydrology	Water Group	Complete – a combination of qualitative and quantitative information has been used in this report to address this requirement (see Appendix B). The method can be improved in future when more comprehensive telemetry is available.
R.42	The Water Group to update the active management policy to further describe how proposals to expand the areas where active management rules apply will be considered.	Water Group	underway and due by February 2026
R.44	The Water Group to update procedure manuals to reflect new WSP provisions for active management of floodplain harvesting licences.	Water Group	underway

REF	Review recommendations	Agency	Status
R.45	The Water Group and WaterNSW to discuss management of expressions of interest (EOIs) with licence holders in 2024.	Water Group	Complete
R.46	WaterNSW to investigate the possibility of upgrading the current model to enable attenuation of AEW.	WaterNSW	not started
R.47	The Water Group to consult with affected Macquarie–Bogan stakeholders in 2024 to seek suggestions for improvement and consult on proposed procedure changes.	Water Group	underway – some consultation has occurred as part of plan remake and will continue in 2025
R.48	The Water Group to clarify, during the Active Management in Unregulated Rivers Policy review, whether non-HEW licences can submit EOIs to protect water.	Water Group	not started but due by February 2026
R.49	The Water Group to update the Macquarie–Bogan procedures manual to clarify that both AEW and flow below CTP is to be protected.	Water Group	underway