Australian Government
Commonwealth Environmental Water Holder

Response to the Inspector-General of Water Compliance 'Steady as it Flows'

An assessment of River Murray operations and environmental water management

May 2023

Acknowledgement of the Traditional Owners

The Commonwealth Environmental Water Holder (CEWH) acknowledges the First Nations communities of the Murray–Darling Basin (the Basin) and pays respect to their Elders past and present.

We acknowledge First Nations people as the Traditional Owners and custodians of the land and waters of the Basin. We recognise the intrinsic connection of First Nations peoples to Country, and we value their enduring cultural, social, environmental, spiritual, and economic connection to the rivers, wetlands, and floodplains of the Basin.

Over millennia, First Nations peoples have shaped, managed, and cared for the land and waterways that sustain them. The objectives of the CEWH correspond profoundly with the cultural values and obligations Traditional Owners have to Country and community. We are continuing to build relationships with First Nations communities, to learn from and identify ways to support cultural values alongside environmental outcomes with water for the environment.

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About the Commonwealth Environmental Water Holder

The Commonwealth Environmental Water Holder (CEWH) is a statutory position established under the *Water Act 2007* responsible for managing the Commonwealth environmental water holdings.

The Commonwealth environmental water holdings must be managed to protect or restore the environmental assets of Murray-Darling Basin (the Basin), including rivers, lakes, wetlands and floodplains.

The CEWH's functions and the Commonwealth's environmental water holdings are a critical part of the sustainable management of the Basin's water resources over the long-term for environmental, social and economic outcomes.

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Commonwealth Environmental Water Holder's response

Preamble

In 2022, the Inspector-General of Water Compliance (IGWC) completed an assessment of how the Commonwealth environmental water portfolio and the River Murray system are managed by CEWH and the Murray-Darling Basin Authority (MDBA), respectively.

The assessment report (the report), *Steady as it flows: An assessment of River Murray operations and environmental water management* is published on the IGWC website.

The Inspector-General found the CEWH is performing professionally and in accordance with its obligations. While there are opportunities and scope for improvement, none would significantly change how environmental water is planned and managed. The changes are generally incremental, which would be expected as technology, science and management improve over time.

Overall, the IGWC found that the CEWH's:

- approach to planning and delivering water for the environment is robust and effective
- Monitoring, Evaluation and Reporting (MER) is appropriate and sufficient
- communication and outreach program is commendable, particularly through the CEWH's Local Engagement Officer network, but could be enhanced and expanded
- culture is one of continuous improvement and responsiveness to reviews and recommendations, and that
- capacity to refine its operations could be aided by better measurement of, and accounting for environmental water (noting the latter is the statutory responsibility of the states and the MDBA, not the CEWH).

The CEWH is always open to feedback and innovation and welcomes the report and accepts the findings. A detailed response and how the CEWH is working on the areas identified for improvement is provided in this response.

Planning and management of water

IGWC findings

- The CEWH's water planning processes are consistent with Basin Plan.
- This includes following the Environmental Watering Principles such as: coordinating with other water managers, working with local communities and maximising environmental benefits.

The CEWH uses an annual water management cycle to plan, deliver, measure and review the use of Commonwealth environmental water, and works in partnership with other environmental water holders, local landholders, water managers and First Nations people through this process.

Every year is different and the amount of water available changes from year to year, including for environmental water holders. Annually and throughout the year, the CEWH makes decisions regarding how best to use the water it has available based on water allocations, catchment conditions and environmental demand.

Managing the Commonwealth's environmental water holdings to maximise environmental outcomes includes decisions on use of water in a particular year, carryover of water for use early in the new water year, or trade of annual water allocations.

The CEWH agrees with the IGWC's assessment that environmental watering is a complex and highly collaborative process. Productive working relationships with Basin state delivery partners is essential. It is noted however that for some members of the public there can be confusion and uncertainty about how the CEWH operates and who has lead responsibility for different water management functions.

The report suggests that providing more accessible information on core issues around water planning may help the community understand how the CEWH is using its water and develop more confidence in the approach to water planning and use. This could include publishing more detailed information on how a range of climate scenarios are planned for and how decisions are made to use water, and subsequent acquittals. The CEWH is making improvements in this area.

Recent achievements and progress

Each year the CEWH produces a Water Management Plan (WMP) and summary brochures for the northern and southern Basin. The WMP informs decisions made by the CEWH on when and where to deliver available water to benefit the environment of the Basin. The brochures provide a quick reference overview of the annual plan.

The CEWH undertook market research in late 2022 to better understand water user information needs and preferences – primarily to inform a redesign of the CEWH website to make information more accessible. The research is also being used to inform the continuous improvement of information provided in the WMP brochures.

The CEWH is streamlining information in the WMP for 2023–24 and is actively considering how best to communicate information relating to planning processes and decision making.

In March 2023, the CEWH published its approach to engaging and partnering with First Nations in the planning, delivery and monitoring of water for the environment. The CEWH is committed to providing opportunities to empower and support First Nations peoples to care for Country, to

building partnerships with First Nations peoples in ways they determine, and to building confidence of staff to engage with First Nations peoples and culture.

Volumetric measurement of (environmental) water

IGWC findings

- The CEWH adheres to state requirements for measuring its water.
- Measuring and monitoring environmental water can be complex, and improved modelling and mapping tools could make watering events more efficient.

The CEWH invests in projects to improve modelling and mapping tools and collaborates closely with Basin governments to drive improvement to the volumetric measurement of environmental water. As noted in the report, the CEWH relies on state jurisdictions and the MDBA to produce timely and accurate information that measure flows and quantifies environmental water in the Basin.

The MDBA is responsible for bulk-level accounting including calculating how much water is in the River Murray system and informing New South Wales, Victoria and South Australia of their 'share'. In contrast, Basin state governments are responsible for retail-level accounting and allocate water within each water catchment to entitlement holders (including the CEWH), depending on how much water is available.

Accurate and timely accounting of environmental water and continual improvements to measuring environmental flows is a priority. Further progress in quantifying environmental water use will improve the efficient and effective use of the CEWH's portfolio in achieving environmental outcomes. Improving the timeliness of debits and credits to the CEWH's water holding accounts will also improve the availability and agility of recognised 'return flows' for use in environmental assets downstream. However, measuring and assessing environmental water as it moves through a river system or on and off a floodplain or wetland continues to be complex and challenging.

Recent achievements and progress

The CEWH is working within the range of existing committees, working groups and other multijurisdictional forums to drive improvements to modelling and mapping tools, noting this takes time, consistency and investment through strong working relationships with Basin governments.

NSW Pre-requisite Policy Measures Working Group

The NSW Department of Planning and Environment – Water undertakes annual reviews and evaluations of its pre-requisite policy measures, which includes accounting arrangements for return flows. Through the NSW Pre-requisite Policy Measures Working Group, the CEWH participates in these evaluations, which have seen improved accounting methods developed. For example, the variable environmental water use method to apply losses on environmental water in the River Murray from both the Murrumbidgee and Lower Baaka (Darling) now takes into account the volume of environmental water entering and the overall flow rate in the River Murray and allows for a more accurate recognition of environmental water return flows from the Murrumbidgee and Lower Baaka at the South Australian border.

Through this working group, the CEWH and NSW agencies are also helping to define environmental watering scenarios for Werai Forest, Yanco Creek and the Mid Murrumbidgee to refine the scope of requirements for loss accounting methods in these high priority areas.

Multi-jurisdictional Environmental Watering Improvement Group
Through the multi-jurisdictional Environmental Watering Improvement Group a range of changes aimed at improving environmental water accounting are progressing, including developing:

- new protocols for the quality assurance and validation of models to estimate water use at environmental sites, and
- fit-for-purpose practical and reliable environmental water metering/measurement guidelines that also guide ongoing improvement in the methods and procedures for environmental water measurement.

These changes will improve accounting methods for environmental water use.

Partnering with the MDBA
In partnership with the MDBA, the CEWH developed a hindcast model to examine scenarios of environmental water use within the Goulburn River and River Murray below Hume Dam. The hindcast model results and the currently applied method showed similar loss rates. These results will provide a line of evidence to inform the Basin Officials Committee review of the assumed use method under Specific Objective and Outcome 2.5 of the *Objectives and outcomes for river operations in the River Murray System* and its improvement. Undertaking this project helps builds confidence and provides assurance in the adopted approach for estimating environmental water use in the River Murray.

The Enhanced Environmental Water Delivery Project, a supply measure project under the Murray-Darling Basin Plan's Sustainable Diversion Limit Adjustment Mechanism, is helping to modernise planning, forecasting, accounting, inter-valley coordination, and delivery processes for environmental water across the Murray system. This includes a range of accounting enhancements aimed at improving the timeliness, consistency and accuracy of environmental water accounting.

Monitoring, evaluation and reporting

IGWC findings

- The CEWH's monitoring, evaluation and reporting of environmental water use meets its adaptive management and reporting obligations.
- More work in identifying and communicating the wider social, cultural and economic benefits of environmental watering could build community confidence.

Monitoring and evaluating the outcomes achieved from water for the environment – and adjusting actions based on the evidence – is fundamental to making the best use of this public asset in the national interest. Equally important is communicating the outcomes of these watering actions to build awareness of how water for the environment is making a difference.

The CEWH's science program, Flow Monitoring Evaluation and Research Program (Flow-MER) is designed to meet the CEWH's legislative responsibilities under the *Water Act 2007* and Basin Plan 2012. These responsibilities include demonstrating the environmental outcomes achieved from Commonwealth environmental water.

Collectively with our water delivery partners watering actions undertaken by the CEWH are monitored. The monitoring and research we undertake helps us to better understand how the environment responds to Commonwealth environmental water, which further embeds the CEWH's adaptive management approach.

In addition to the reporting undertaken through Flow-MER, the CEWH also reports annually on the identification of environmental water and the monitoring of its use (Basin Plan Schedule 12, item 9), and every five years on the achievement of environmental outcomes at a Basin scale (Basin Plan Schedule 12, item 7).

As part of the Flow-MER program, communication and engagement is undertaken to improve community awareness and understanding of the environmental outcomes achieved from Commonwealth environmental water. Approximately 10 per cent of the CEWH's science program budget is spent on scientists sharing the monitoring, evaluation and research findings through a range of local activities and fora, as well as through a dedicated website.

The CEWH also works with Basin governments, the MDBA, scientists and local communities to build awareness of the outcomes from Commonwealth environmental water through Flow-MER and other communication and engagement initiatives.

The report identified several challenges in the monitoring and reporting of environmental watering outcomes. These included effective coordination across agencies, balancing effort between the local event scale and the longer term Basin scale, the wider socioeconomic benefits of environmental watering are not well covered and more effort in effective communication is required to tackle the low levels of community awareness of the benefits of environmental water.

The CEWH is continually improving its science program and communication and engagement approach, which will further build understanding and confidence in environmental watering.

Recent achievements and progress

The next iteration of Flow-MER is due to commence in the second half of 2024 and will have a greater focus on integration of First Nations science and knowledge into monitoring, evaluation and research. From this investment the CEWH can better incorporate cultural outcomes as part of the reporting and communication of outcomes.

Effort to better target the communication of monitoring, evaluation and research findings will also be made through a Flow-MER Communication and Engagement Strategy that will be complementary to the CEWH's communications and engagement approach 2021–24.

Monitoring and reporting on the outcomes of the Southern Spring Flow is a good example of multiple agencies working together to combine localised monitoring effort in order to understand outcomes at a system scale. The River Murray Channel Monitoring Plan (2021-22 to 2025-26) incorporates The Living Murray (TLM) funded monitoring (e.g. in the Barmah Millewa reach of the Murray) with Commonwealth-funded Flow-MER monitoring (e.g. in the Lower Murray) and fills the gap in the middle (e.g. reaches of the NSW Murray) via Commonwealth and TLM funding. This enables scientists working across the monitoring programs to build a picture of River Murray channel productivity and fish response to coordinated environmental watering along more than 2,000 km of its length.

The CEWH is also investing in better understanding how the investments made under Commonwealth Environmental Water Office Environmental Activities Framework (CEAF) provide

social and economic benefits. Through the CEAF, the CEWH is investing proceeds of sale of annual water allocations to fund environmental activities that will improve delivery of Commonwealth environmental water.

The CEWH agrees there is a need to identify and communicate the wider social, cultural and economic benefits of environmental watering to help build community confidence. The CEWH is closely engaged in the work being undertaken by the MDBA to identify the wider social, cultural and economic benefits of environmental watering including:

1. The Murray-Darling Water and Environment Research Program has a social, economic and cultural outcomes theme that is focused on the relationship between riverine health and social, emotional, and economic well-being.
2. The Basin Condition Monitoring Program provides funding for a project to improve the understanding of economic activities that depend on water other than irrigated agriculture including tourism, recreation and floodplain grazing.

The CEWH will explore the outcomes from these programs to inform future activities.

Communications and community outreach

IGWC findings

- The CEWH has put considerable effort into communication, however the results of this effort are unclear.
- Investment in Local Engagement Officers has created positive on-ground relationships; extending this model would have benefits.

Communication and engagement with communities and stakeholders across the Basin continues to be one of the top priorities for the CEWH and improvements continue to be made in this area. LEOs have been successful in ensuring local knowledge and understanding about management of Commonwealth environmental water.

The report identified:

- That recent research has indicated that out of 15 water management organisations and agencies operating in the Basin, the CEWH was the least well known.
- It is difficult for the community to get information on the reason for a specific flow event, including the flow objectives and expected benefits of the flow. This contributes to misconceptions of the value of environmental water, how it is used for the strategic health of the Basin and how this could benefit the community.
- Improvements in communication and engagement would help build community understanding of what the CEWH is trying to achieve and how they do their work.
- CEWH is open to feedback and innovation and is seen as taking reviews and recommendations for change seriously.

Recent achievements and progress

All of the CEWH's communication and engagement activities are strategically aligned to the communications and engagement approach 2021–24.

The CEWH is continually uplifting communication activities, growing distribution channels and providing tailored, timely information on where water for the environment is used and how it is making a difference.

The CEWH has a range of projects underway aimed at providing an uplift in communications including:

- redesigning the CEWH website to provide easily accessible information that meet the needs of our stakeholders. This has been informed by research into stakeholder information needs and preferences. This activity is currently underway with a completion date of early 2024.
- developing a dynamic online map showing where and when Commonwealth environmental water is being delivered. This will be available on the CEWH website by the second half of 2023.
- investing more resources in communications and media activities to better meet the needs of both Basin communities and a national audiences. This project will also design an evaluation plan to better measure the effectiveness of CEWH communication activities.

The CEWH continues to publish timely, tailored information on water deliveries. Interested members of the community can subscribe to updates that are made publicly available on the CEWH website, promoted on social media and distributed via a subscription to interested members of the communities including irrigators, First Nations people, peak bodies, catchment management groups and environmental groups.

One of the CEWH's most effective engagement methods with regional communities is through Local Engagement Officers (LEOs). These officers live in Basin communities and have extensive networks and a strong understanding of local issues. The capacity to expand its network of engagement officers will be subject to available funding. In addition, the CEWH has expanded the number of staff regionally-based in the Basin, who can support the activities of the local engagement officers.