Submission No 125

INQUIRY INTO RATIONALE FOR, AND IMPACTS OF, NEW DAMS AND OTHER WATER INFRASTRUCTURE IN NSW

Organisation: Murray Darling Basin Authority

Date Received: 22 September 2020

Australian Government

MURRAY–DARLING BASIN AUTHORITY

Office of the Chief Executive

Ms Cate Faehrmann MLC
Chair, Portfolio Committee No. 7 – Planning and Environment
Legislative Council
Parliament House
6 Macquarie Street
SYDNEY NSW 2001

Dear Chair

Submission to the 'Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW.'

The Murray Darling Basin Authority (MDBA) has been following the issues that have been recently highlighted about new dam infrastructure being promoted for installation within New South Wales.

The Authority would like to provide the following information via our attached submission for your committee's consideration as a part of your inquiries.

Our submission focuses on new water infrastructure (dams, weirs) being proposed in New South Wales and the interaction with Water Resource Plans (WRPs) and Sustainable Diversion Limits (SDLs) as codified in the Murray Darling Basin Plan (2012).

For any further information on this submission please contact Executive Director, Basin Plan Regulation, Tim Goodes on .

Yours sincerely

Phillip Glyde

22 September 2020

Australian Government

MURRAY–DARLING BASIN AUTHORITY

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Acknowledgement of the Traditional Owners of the Murray–Darling Basin

The Murray–Darling Basin Authority pays respect to the Traditional Owners and their Nations of the Murray–Darling Basin. We acknowledge their deep cultural, social, environmental, spiritual and economic connection to their lands and waters.

The guidance and support received from the Murray Lower Darling Rivers Indigenous Nations, the Northern Basin Aboriginal Nations and our many Traditional Owner friends and colleagues is very much valued and appreciated.

Aboriginal people should be aware that this publication may contain images, names or quotations of deceased persons.

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1 Introduction

The Murray–Darling Basin Authority (MDBA) welcomes the opportunity to provide a submission to the New South Wales Legislative Council's Planning and Environment Committee's 2020 '*Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW*'.

Over the past eight years, the MDBA has supported the Basin governments to implement the Murray Darling Basin Plan (2012). The Basin is now better connected, there are catchment level water resource plans in operation or under final assessment for accreditation, and the Basin Plan sustainable diversions are in place. In under a decade there has been a significant step-change for Basin water management, and all governments continue to adapt and improve.

Throughout the development and implementation of the Basin Plan, the MDBA has learned many lessons, and identified challenges that face water management across the Basin and Australia more broadly.

This submission focuses on new water infrastructure (dams, weirs) being proposed in New South Wales (NSW) and the interaction with Water Resource Plans (WRPs) and Sustainable Diversion Limits (SDLs).

So that we can outline key points of interest to your committee about any new dams or works being constructed we have firstly provided background about WRPs and SDLs. We have then outlined why these key components are important when considering proposals for operating new dams and other water infrastructure and the potential interactions with these components that may arise from constructing and operating water infrastructure.

Our key point in this submission is all new infrastructure within the Murray Darling Basin (in this case within the NSW portion of the Basin) will be required to operate consistently with the Basin Plan provisions.

2 Background

2.1 The Basin Plan

During the preparation of the Basin Plan, there was widespread agreement across government that a plan was needed to manage our water carefully and protect the Basin for future generations. The Basin Plan was developed to manage the Basin as a single connected system.

The aim of the Basin Plan is to bring the Basin back to a healthier and sustainable state, while continuing to support farming and other industries for the benefit of the Australian community.

The development of the Plan required several years of research and analysis to understand how much water could be taken from the Basin for consumptive use, without compromising our rivers, lakes and wetlands and the animals and plants that depend on them.

The science behind the Plan was independently reviewed by Australian and international scientists.

The Plan also considered a wide range of social and economic information. It became apparent that the reduction in water availability for human use would have an impact on communities, businesses and industries in the Basin. Analysis of the social and economic effects was conducted by the MDBA and other commissioned experts, to help achieve the best balance between water users, communities and the environment.

2.2 Water Resource Plans

The *Water Act (2007) (Cth)* sets out the requirement for states to develop WRPs to ensure state water management rules meet Basin Plan requirements, and in doing so bring some aspects of state legislation into Commonwealth law. The aim of these WRPs is to strengthen water management at a local level and outline how each region will seek to achieve community, cultural, environmental and economic outcomes.

Each Basin state has its own water management framework, and therefore each state has approached WRP development in different ways. Despite the variation in the approach to and format of WRPs, the plans themselves ensure consistency in water management across the Basin, by demonstrating how state water management frameworks comply with the Basin Plan. In this way, WRPs are a step closer to achieving consistent water management across all states.

The MDBA has established a comprehensive WRP assessment process that accounts for jurisdictional differences. All WRPs are assessed against the requirements as set out in

Chapter 10 of the Basin Plan. 13 WRPs are in operation as at September 2020, including all WRPs in Queensland, South Australia, Victoria and the Australian Capital Territory. A further 20 NSW WRPs (9 surface water and 11 groundwater) are with the MDBA for assessment.

The MDBA takes a risk-based approach to regulating WRP compliance, in line with its legislated functions and powers under the Water Act and the MDBA's Compliance and Enforcement Policy 2018- 2021.

The MDBA identifies risks to WRP compliance and appropriate actions to respond to the risks through an annual comprehensive assessment of risks to WRP and Basin Plan compliance, regular reviews of the risk assessment, and in response to allegations or intelligence received by the MDBA.

The MDBA's public regulatory program is delivered through the MDBA's annual Compliance Priorities and Audit program, which are published in June each year. The Australian Government has announced that it intends to transfer this function to an independent Inspector-General of Water Compliance, to be established through amendment to the Water Act.

2.3 Sustainable Diversion Limits

The SDL accounting framework in the Basin Plan aims to strike a balance between access to water for Basin communities while also providing water for the environment for the benefit of all Australians.

At its core, the Basin Plan sets SDLs, which limit the amount of consumptive water that can be sustainably taken from the surface and groundwater resources of the Basin for use by towns and communities, irrigators and farmers.

The SDLs reflect a sustainable level of take and underpin the achievement of the Basin Plan outcomes. They cover take from watercourses and regulated rivers, floodplain harvesting, runoff dams, commercial plantations (net take), basic rights and take from groundwater.

SDL compliance commenced from 1 July 2019. However, this is contingent on Basin state WRPs being formally accredited by the Commonwealth Minister for Water.

The MDBA has bilateral agreements in place with state governments which allow SDL accounting to commence prior to the full accreditation of all WRPs. SDLs are implemented through WRPs which provide the mechanisms for limiting take to the SDLs.

Each SDL applies to a geographic area within or encompassing a WRP area, known as an SDL resource unit. Specified as long-term average volumes, SDLs are determined relative to the amount of water that was used prior to the Basin Plan being implemented, i.e. baseline diversion limits (BDLs).

To achieve the SDLs for all surface water SDL resource units, the BDL is reduced by a target environmental water recovery volume and/or an amount determined through the sustainable diversion limit adjustment mechanism (SDLAM). Except for two areas, groundwater SDLs are equal to or higher than the BDLs because water take may be increased sustainably in many groundwater systems.

3 Key Issues

3.1 New Water Infrastructure

The construction of new water infrastructure like dams/weirs is not expressly regulated under the Water Act nor the Basin Plan. State and other Commonwealth legislation (such as the *Environment Protection and Biodiversity Conservation Act 1999 (Cth),* EPBC Act) apply to such proposals, and any new infrastructure is required to be consistent with such instruments.

Where accredited WRPs are in place, the 55 requirements set out in Chapter 10 of the Basin Plan are reflected in such WRPs. This includes compliance with SDLs and ensuring there is no net reduction in the protection of Planned Environmental Water (PEW) as provided for in state law immediately prior to the Basin Plan.

The NSW WRPs, that have been submitted in 2020 to the MDBA, are currently undergoing assessment and are, as understood at this stage of the assessment, based on existing levels of infrastructure in place throughout NSW.

Should any proposed new infrastructure be put into operation, the Basin Plan settings will continue to apply. This will require the SDLs to continue to be met. While, for example, a larger headworks storage may provide for improved reliability of supply and enhanced ability to provide for the supply of water for agriculture, no increases in diversion beyond the SDL would be permissible even though storage capacity has increased.

Any improved reliability of supply to some users may have to be offset by the State through the reduction in reliability to some other classes of users.

3.2 Amendments to Water Resource Plans

NSW would be required to amend any accredited WRPs before the new infrastructure comes into operation to provide for any changed management arrangements. The Authority would then assess the proposed changes against the 55 requirements set out in Chapter 10 of the Basin Plan and to make a recommendation to the Commonwealth Water Minister as to whether to accredit the amended water resource plan.

Without an amendment, NSW would be required to manage the water resources of the WRP area consistent with the arrangements set out in the previously accredited WRP, without new rules and arrangements for new infrastructure.

3.3 Planned Environmental Water

A further key requirement of the Basin Plan is that that there is no net reduction in the protection of PEW from the protection provided under state water management law in 2012 – prior to the creation of the Basin Plan.

In NSW, PEW is the water remaining available to the environment after allowing for water use up to the SDL and the use of water entitlements held for the environment (Held Environmental Water, HEW).

Again, using the example of an enlarged headworks storage, if such infrastructure had a material effect on the timing and utility of PEW, then any detriment would need to be offset in some way to ensure there is "no net reduction" in its protection. This provision may constrain the operation of any enlarged dam.

3.4 Environmental Impacts

Environmental impacts of dams on rivers and their riparian environments can be numerous. Dams can alter the timing and quantity of flow; change the temperature and chemical composition of water, leading to issues like cold water pollution; block fish migrations, which for some species separates spawning habitats from rearing habitats; and trap sediments, which are critical for maintaining habitats downstream of the dam. The extent to which these impacts apply will vary according to the nature of the dam being constructed and the way it is operated.

By way of example, the MDBA has undertaken a preliminary assessment of one infrastructure project: the Macquarie River Re-regulating Storage. Possible environmental impacts on the environment included reduced flows to the Macquarie Marshes (a Ramsar listed wetland of international significance), stratification of the weir pool during summer, increased area of non-flowing habitat, habitat fragmentation, declines in nationally threatened fish species' populations, reduction of waterbird breeding habitat and death of riparian vegetation. In this case the environmental impacts of this and other proposed infrastructure would need to be assessed by NSW, as the Macquarie River Re-regulating Storage is a controlled action requiring approval under the EPBC Act. In other cases the requirements of both Commonwealth and NSW environmental legislation would need to be met.

3.5 First Nations

For any organisation looking to construct or enlarge or change the operation of dams, attention is to be drawn to ensuring that First Nations, industry and communities generally be consulted on all changes being considered, and any impacts be addressed appropriately.

In relation to the First Nations considerations, the MDBA has used established relationships with First Nations groups when completing cultural heritage assessments at the state level for the original WRPs. If the operation of dams is to change then First Nations considerations would need to be revisited in an amended WRP.

4 Conclusion

Any proponent proposing installation of new infrastructure, or enhancement of existing infrastructure, for water management in the New South Wales Murray Darling Basin needs to be aware that the existing Basin Plan (2012) regulatory settings will continue to apply and would need to be adhered to as set out in this submission.

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