Unpacking River Murray deliverability, shortfall risk and the Barmah Choke

June 2022

Tyson Milne, River Operations, MDBA



Australian Government



Acknowledgement of Country

The Murray–Darling Basin Authority (MDBA) 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 MDBA understands the need for recognition of Traditional Owner knowledge and cultural values in natural resource management, associated with the Basin.

Session outline



A quick recap – Shortfall



Shortfall - not being able to deliver water allocations to users when they need them.

These come about in two ways:

- A delivery shortfall occurs when actual water use is higher than was forecast when water was released from storages weeks earlier
- A system shortfall occurs when the combined capacity of the system is unable to supply all downstream requirements over the full season

Current water sharing



Current challenges



Deliverability

declining river capacity risk of shortfall



Land-use change

increased permanent plantings and associated change in water use



Climate change

adapting to a warmer, drier future



E-water delivery

optimal delivery of environmental water

Deliverability: Barmah-Millewa reach



Mining for gold metres-deep in the bed of a river near Beechworth (courtesy State Library of Victoria).

- > Flows reduced from 11,300ML/d in the 1980s to ~9,200ML/d today
- > 20+ million cubic metres of sand Yarrawonga to Picnic Pt
- options being explored for joint-government decision
- > aim to improve water flows
- > will report end-2022

Land use change

Area of permanent horticultural crops 2003-2021



- SunRISE study planning tool
- NSW-Vic-SA Murray from Wakool Junction to the Barrages
- Expansion
 notable from
 2015

High quality data and science underpins decision making

Common community perceptions



There has been no increase in downstream trade of water through the Barmah Choke



More water-use in Sunraysia to date appears to have little effect on conveyance losses, but is being further investigated



Constraints relaxation projects are for environmental water only

River Murray water use in summer below the Choke Barmah – SA Border



Climate change



 > Climatic step-change around year 2000
 > Future will be warmer, drier with more severe weather events

Adapting to climate
 change is a key focus
 for us all

Water for the environment: patterns of use



How are we addressing the reduced capacity of the river?

Timeline of action

Completed	Underway (2022)	Planned (2023 and beyond)	
 Shortfall planning MDBA Shortfall response plans for delivery shortfall Annual interjurisdictional simulation exercises 2020/2021 	 Shortfall planning Development of State Shortfall Response Plans 	 Shortfall planning Continued State shortfall planning and simulation exercises Annual interjurisdictional 	
Sand Management Sediment management preliminary investigation report • Sediment source report • Sediment transport report	Sand Management • Options development for targeted sand removal	Sand Management Business case development for targeted sand removal 	
 Barmah-Millewa Reach Capacity Technical Oversight Committee established Contractors engaged 	Barmah-Millewa Reach Capacity • Barmah-Millewa Feasibility Study with report to be delivered to Basin Officials Committee /Ministerial Council Dec 2022	Barmah-Millewa Reach Capacity • Decision by joint governments on next steps	

Barmah-Millewa Feasibility Study



Options being assessed

Potential river works within the Barmah-Millewa reach	Use of Snowy Hydro to transfer Murray release to the Murrumbidgee	Changes to timing of Lake Victoria transfers
Optimisation of the existing MIL system	Options for delivery through the GMID	Sediment management

Thank you

Office locations

Adelaide Albury-Wodonga Canberra Goondiwindi

mdba.gov.au

()

 \bigcirc

Griffith Mildura Murray Bridge Toowoomba

1800 630 114

engagement@mdba.gov.au



Australian Government

