

Hume Dam airspace management and Pre-Release Rules

February 2017

The Basin Plan sets a sustainable diversion limit (SDL) for each catchment and aquifer in the Basin, as well as an overall limit for the Basin as a whole. In order to meet the new limits, 2750 GL of water needs to be recovered Basin-wide. NSW's share of this "SDL gap" is 1310 GL, with approximately 965 GL¹ of water recovered to date. For the remaining 345 GL of recovery, NSW is pursuing investment by the Commonwealth Government in a range of projects and programs, with infrastructure projects being prioritised over water buybacks.

This document provides an overview of *Hume Dam airspace management and Pre-Release Rules* supply measure project being proposed by NSW.

This is a joint proposal by NSW and Victorian agencies. This business case sets out proposals for an operational rule change to include estimates of environmental watering requirements in the forward assessment of projected demands used for the management of the airspace at Lake Hume. The resulting outcome will be the delivery of equivalent environmental outcomes as proposed in the Murray-Darling Basin Plan (Basin Plan) but with less water, so generating a possible Sustainable Diversion Limit (SDL) offset.

Fast Facts

Location	Murray River below Lake Hume
Type of project	Supply measure involving a change to river operation rules which allow more flexibility and control in when environmental water is delivered the River Murray
Status	Business case submitted in November 2015 and is being assessed by inter-jurisdictional SDL adjustment advisory committee (SDLAAC).
Estimated SDL adjustment	Potentially 70 GL/year (A possible increase of 30 GL in the plausible supply contribution is the total for all projects modelled in the 10 pack collectively)
Related SDL adjustment projects	Any potential inter-dependencies between this supply measure and other measures cannot be formally ascertained at this time, until a final package of proposed supply measures is identified and modelled by the MDBA.

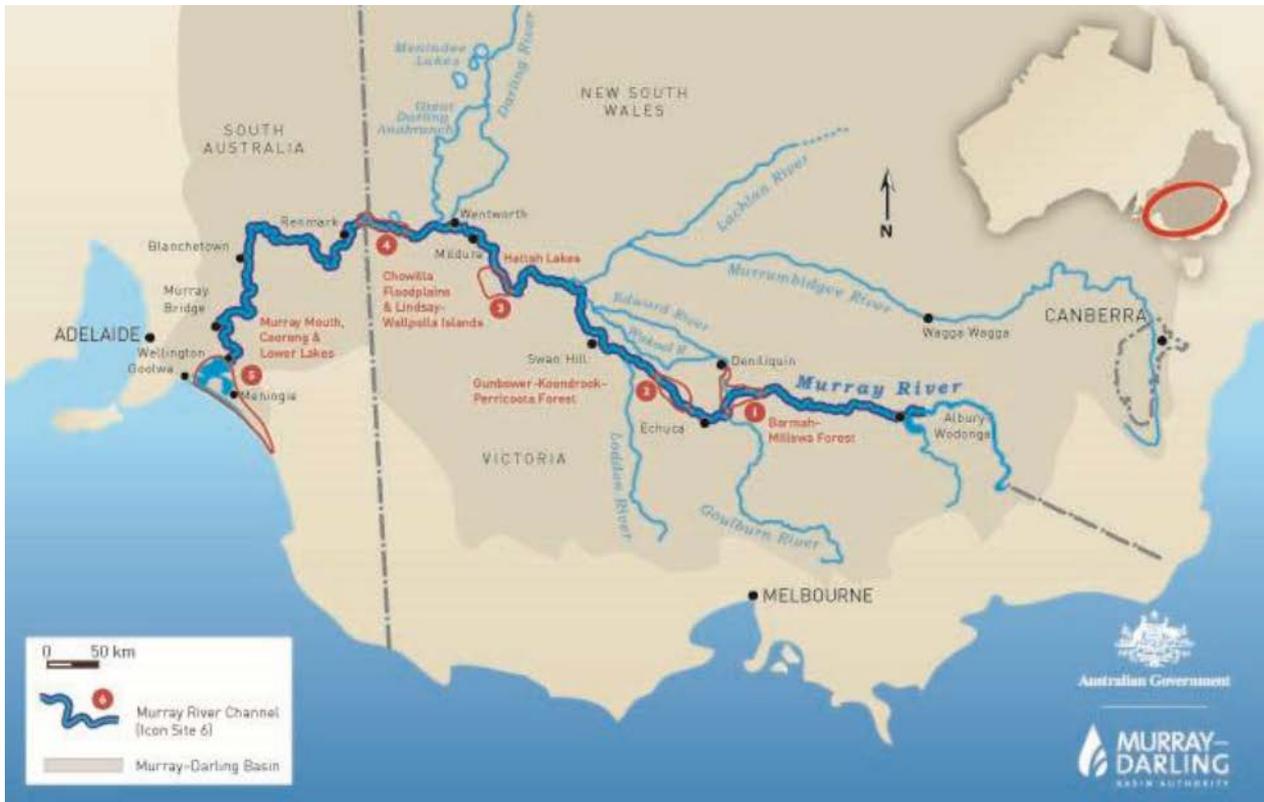
The project area

Lake Hume is the major operating storage on the River Murray system. The storage regulates the River Murray, and re-regulates water discharged from the Snowy Mountains Hydro-electric Scheme. It also receives water previously held in Dartmouth Dam on the Mitta Mitta River. Releases from Lake Hume supply irrigation, domestic and stock, urban and environmental

¹ Information sourced from MDBA website. Includes Commonwealth water recoveries contracted through the Sustainable Rural Water Use and Infrastructure Program (SRWUIP) Infrastructure projects, the South Australian River Murray Sustainability Program (SARMSP) and the Water Smart Australia Program. Estimates do not take into account potential changes as a result of the Northern Basin Review and proposed changes to the long term diversion limit equivalent factors.

water; Lake Hume also affects the delivery of water to a large number of important environmental assets, including all six of the Icon Sites identified under The Living Murray (TLM) initiative.

Figure 1: River Murray channel controlled by Hume Dam (Source: MDBA).



The proposal

The proposed change to the operating rules is for consideration of forecast environmental demands to be included in the planning of target storage volumes and pre-releases. This can be represented by the following amended formula that it is proposed will be used to determine target storage volumes:

Target storage volume = full supply storage volume – (forecast inflow – forecast irrigation releases – forecast environmental releases)

The proposed rule change is still consistent with the high level outcomes set out in the Objectives and Outcomes for River Operations document. It updates the detailed operational procedures and rules to appropriately reflect the shifts in the source of demand for releases from Lake Hume that have and will continue to occur as more water is recovered for environmental use.

Including forecast environmental water release needs into the storage target setting for Lake Hume results in significant reductions in pre-release volumes required to manage flood risks, without significantly increasing the annual spill volumes from the storage. This results in more water being available in Lake Hume for allocation against entitlements to meet irrigation and environmental demands.

Ecological Outcomes

The intention of the proposed rule change is to ensure better integration of environmental demands into the management of Hume Dam. This should increase the level, extent and focus of environmental benefits as were assumed in the benchmark modelling for the Basin Plan.

Risks and Impacts

A rigorous risk assessment was completed as part of the Business Case development. None of the identified risks met the “high” criteria consistent with the AS/NZS ISO 31000:2009 (as required under the guideline requirements).

Consultation

Due to the scope and scale of the proposal (operational rule changes), the drafting of the business case did not include a detailed consultation process with local landholders and interest groups. Engagement undertaken to date has involved consultation with key agencies and providing information about the proposal to other interested parties. However it is proposed that following approval of this business case, further consultation will be undertaken with key agencies, local landholders, and other interest groups. In anticipation of this future consultation a stakeholder map is part of the business case.

Next steps for adjustment mechanism confirmation

Date	Details
30 June 2017	BOC notification of final approved SDL adjustment package
Late October 2017	MDBA public consultation on proposed SDL adjustment
15 December 2017	MDBA recommend SDL adjustment to Commonwealth Water Minister
February 2018	Amendments tabled in parliament
From March 2018	Commence detailed design, construction and commissioning under Commonwealth funding

More information

Background on the Basin Plan implementation and the SDL adjustment process can be obtained from:

www.mdba.gov.au

DPI Water is the lead agency for the implementation of the Basin Plan agreements within NSW. Reports on NSW SDL adjustment activities reports can be obtained from:

<http://www.water.nsw.gov.au/Water-management/Water-recovery>

Acknowledgements

This is a joint proposal between NSW DPI, and the Victorian Department of Environmental, Land, Water and Planning DELWP. Goulburn-Murray Water, Water NSW, North East Water and North East and Goulburn Broken Catchment Management Authorities have all contributed to the development of the Business Case for this NSW SDL adjustment project.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (February 2017). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser..