

UPDATE FOR STAKEHOLDERS MAY 2016

NSW Sustainable Diversion Limit adjustment proposals

May 2016

This update focuses on NSW's identification, assessment and documentation of SDL adjustment proposals, both supply measures and constraints measures. This information is provided to stakeholders as a snap shot in time to those interested in the potential future water recovery actions in each resource management unit established under the Murray Darling Basin Plan.

Where are we up to in the process?

On the 22 April 2016, Ministers agreed to a Sustainable Diversion Limit Adjustment Mechanism (SDLAM) package of supply, efficiency and constraints measures. Ministerial Council has also requested that the Commonwealth amend the Basin Plan to provide for a second SDL adjustment step by 30 June 2017. This would allow for a second tranche of projects to be developed to further improve the outcomes of the Basin Plan.

An overview of the SDL adjustment mechanism and inter-jurisdiction review process was provided in the first Stakeholder Update made available in January. The outcomes of prefeasibility assessment of potential projects were summarised in the January and June 2015 Stakeholder Updates. Both of these updates are available on the DPI Water website - www.water.nsw.gov.au. Jurisdictions are now considering phase 2 proposals against the guidelines endorsed by the Basin Officials Committee.

What projects are being pursued?

Supply measure proposals

A total of eight NSW led supply measures and three Victorian led joint supply measure business cases have been formally submitted to the inter-jurisdictional Sustainable Diversion Limit Adjustment Advisory Committee (SDLAAC) for assessment and endorsement by the Basin Officials Committee (BOC).

An additional NSW led supply measure business case for the Structural and Operational Changes at Menindee Lakes proposal is still being developed. Completion of the feasibility assessment by SDLAAC is required before a business case can be submitted for a joint Victorian led rules based proposal for the Improved Regulation of River Murray under future demand conditions.

These projects have been included in the SDLAM notification agreed to by Minister's on 22 April 2016 (<http://www.mdba.gov.au/publications/mdba-reports/sdl-adjustment-proposals>). Details of NSW supply measure projects are set out in Table 1 at the end of this update.

Constraints measure proposals

NSW, together with Victoria and South Australia for their relevant constraints projects, have agreed to continue to progress the constraint measure proposals, with a commitment to ensure proposals for measures to ease river flow constraints are fully integrated and to make sure community consultation is done to ensure options are developed to mitigate any third party impacts. NSW will only pursue constraints projects where there are no unacceptable third party impacts to landholders. Development of a business case for the Lower Darling priority area will be progressed in conjunction with the proposal for structural and operational changes at Menindee Lakes.

DPI Water is developing the constraints proposals, in conjunction with the NSW Office of Environment and Heritage and Water NSW. Funding for this work has been provided by the Commonwealth Government.

Sustainable Diversion Limit Adjustment Mechanism proposals in context

The Commonwealth 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, 2,750 GL of water needs to be recovered Basin-wide; NSW's share of this "SDL gap" is 1,312 GL. Approximately 870 GL of water has been recovered to date.

For the remaining 442 GL of recovery, NSW is pursuing investment by the Australian government in a range of projects and programs, such as infrastructure and efficiency projects, instead of non-strategic water buybacks.

Two key areas are being progressed by the NSW government for reducing the gap between the Basin Plan limit and those in existing water sharing plans.

Supply measure proposals ("offsets"), which allow equivalent environmental outcomes to be achieved with less water, including measures such as new works (e.g. regulators, levees), changes in river operations and evaporative savings projects.

Existing Sustaining the Basin programs, achieving water savings through infrastructure works, such as Basin Pipe Project and the Irrigated Farm Modernisation program.

Constraints measure projects, which propose changes to the timing or volume of environmental water delivery. The NSW Government will not pursue these projects where there are unacceptable third-party impacts. Mitigation measures may include undertaking access works (such as lifting bridges and changing culverts), investigating easements, amending river operating rules, and increasing outlet capacity in dams and other water storages. DPI Water is currently working with communities to determine what river heights may be considered as part of these projects and what issues may need to be addressed.

How do I get more information?

Background on the Basin Plan implementation and the SDL adjustment process, efficiency measures and the constraints management strategy can be obtained from: <http://www.mdba.gov.au/basin-plan-roll-out/sustainable-diversion-limits/surface-water>

DPI Water is the lead agency for the implementation of the Basin Plan agreements within NSW. The following reports can be obtained from: <http://www.water.nsw.gov.au/Water-management/Water-recovery>

- NSW Environmental Works and Measures Program Evaluation Reports (Part A and Part B)
- NSW Sustainable Diversion Limit adjustment proposals - Update for Stakeholders (January 2015)
- NSW Sustainable Diversion Limit adjustment proposals - Update for Stakeholders (June 2015)
- Summary of NSW Sustainable Diversion Limit Proposals (January 2015)

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (March 2016). 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.

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Table 1 – NSW supply and constraints measure proposals

Project	Description	SDL adjustment ¹	Estimated cost	Proponent	Location
TLM environmental works and measures	Koondrook-Perricoota Forest is a highly significant floodplain ecosystem on the River Murray in NSW. Works include upstream structures to divert water into the forest from Torrumbarry Weir and downstream structures to control release of water from the forest and to maximise return flows back to the Murray. The structures have been built and partially commissioned by Water NSW and MDBA River Murray Operation.	Preliminary modelling complete. At least 130 GL/year for all 6 TLM sites	NIL	NSW (jointly with other jurisdictions)	NSW Murray
Modification of weirs along the Murray	Operational changes to the Murray Lock 8 and 9 weirs which will allow weir pool heights to be varied to better deliver water onto floodplain at ecologically beneficial times, and to reduce evaporation at other times. The project also involves works in the Carrs, Capitts and Bunberoo Creek systems aimed at improving environmental water delivery to this area and construction of a fish way on the Frenchman's creek inlet regulator for the Lake Victoria storage.	Potentially 5-10 GL/year	\$29 million	NSW	NSW Murray
2011 Snowy Water Licence Schedule 4 Amendments to River Murray Increased Flows Call Out Provisions	The amendment to the Snowy Hydro licence in 2011 allows the water recovered by the Murray River Increased Flows to be held and called out. Previously the release of the water was at the discretion of Snowy Hydro and was generally at times suited to Snowy Hydro's commercial outcomes. This water can now be called out to meet environmental outcomes.	Up to 60 GL/year	Nil	Joint NSW / Vic	NSW Murray & Victorian Murray
Hume Dam airspace management and pre-releases.	The <i>Hume Dam Airspace Management and Pre-releases</i> offset proposal is a SDL adjustment supply measure that would aim to optimise pre-releases from Hume Dam such that environmental outcomes are enhanced. There is potential to modify storage operation rules to provide pre-releases in a pattern that is beneficial to the environment if this does not impact	At least 70 GL/year	Nil	Joint Vic / NSW	NSW Murray & Victorian Murray

¹ Estimates of potential SDL adjustment are based on the SDL Adjustment Stocktake Report (August 2015) prepared by Graeme Turner and Warren Martin for the Murray Darling Basin Ministerial Council. Preliminary modelled results are included where available, but will vary depending on the number and type of measures included in the final package.

Project	Description	SDL adjustment ¹	Estimated cost	Proponent	Location
	on supply reliability.				
Improved regulation of River Murray under future demand conditions	This proposal seeks a SDL adjustment in recognition of water savings arising from more efficient operation of the River Murray under future demand conditions. This water saving will 'free' water up and result in a net increase in successful flooding events in Barmah-Millewa Forest, Gunbower-Koondrook-Perricoota Forest, Hattah Lakes and the Chowilla Floodplain.	Currently unknown	Nil	Joint Vic / NSW	Victorian Murray
Change to 6 inch rule downstream of Hume Dam	The 6 inch rule constrains the rate at which releases can be reduced from Hume Dam, to minimise the potential for river bank collapse and/or trees slumping into the river. It may be possible for releases to be reduced more quickly without bank damage where flows have not been elevated for an extended period. And therefore reduce "operational surplus". The water saved could be used to provide additional environmental benefits.	Potentially 0-10 GL/year	Nil	Joint Vic / NSW	NSW Murray & Victorian Murray
Review of Barmah-Millewa Environmental Water Allowance Rules	A comparison of the representation of the existing Barmah-Millewa Watering rules in the MDBA Benchmark and Baseline models has found there is opportunity to vary the rules associated with the BMFEWA to allow more optimal use of other environmental entitlements to better target the environmental requirements specified in the Basin Plan.	At least 40 GL/year	Nil	Joint Vic / NSW	Victorian Murray
Structural and operational changes at Menindee Lakes	Maintaining most water in the upstream lakes to generate savings and use of groundwater as an emergency drought backup supply (only) for Broken Hill. Changes to NSW/MDBA shared management arrangements, and other consequent rule changes, including Change to harmony rules at Lake Victoria and delivery of Additional Dilution Flows.	Potentially 50- 80 GL/year.	TBA - funding of up to \$157 m separately available	NSW	NSW Murray Victorian Murray & Lower Darling

Project	Description	SDL adjustment ¹	Estimated cost	Proponent	Location
Murray and Murrumbidgee valley national parks works	A suite of works within Millewa and Yanga National Parks aimed at delivering a more appropriate watering regime to core wetland communities within these areas.	Potentially 10-20 GL/year	\$29.2 million	NSW	NSW Murray & Murrumbidgee
Alternative supply systems for effluent creeks – Murrumbidgee River	Provision of alternative irrigation, stock and domestic water supply options in 5 focus areas in the Murrumbidgee system (Yanco, Forest Creek, Columbo and Billabong Creeks, Old Man Creek, and Bundidgerri Creek). This will modernise supply and enable decommissioning of high loss effluent creeks from the regulated water supply system, returning them to a more natural flow regime	Potentially 10-20 GL/year	\$31.9 million	NSW	Murrumbidgee
Nimmie Caira infrastructure modifications	In addition to the water purchase component (173 GL), there is a possible SDL adjustment as a result of improved flow of water through Lowbidgee system to environmental assets and potentially downstream.	Potentially 20-50 GL/year	\$10 million	NSW	Murrumbidgee
Computer Aided River Management (CARM) Murrumbidgee	CARM is a series of operational tools to better process river data such as flows, extractions and releases and to forecast flows and weather related flow trends. A pilot project in the Murrumbidgee is being implemented to improve the timing of water delivery and in doing so reduce the volume of operational loss.	Potentially 10 - 20 GL/year	Nil	NSW	Murrumbidgee
Yanco regulator	Increase weir pool capacity and operational control of Yanco regulator and weir pool to the benefit of the environment providing a potential SDL adjustment.	Potentially 10 - 15 GL/year	\$53.2 million	NSW	Murrumbidgee
Hume to Yarrawonga Constraints Management Strategy	Investigates flows up to 40,000ML/day from Hume Dam to identify the potential impacts, mechanisms that mitigate impacts to farming activities due to inundation, from both natural flows and managed delivery of water to environmental assets. This includes investigating a suitable buffer to ensure that landholders are not impacted by unacceptable impacts.	Potentially 30-100 GL/year (as a part of the Murray River integrated constraints package)	Unknown	Vic (jointly with other jurisdictions)	NSW Murray, Victorian Murray, SA Murray
Yarrawonga to Wakool Constraints Management	Investigates flows up to 30,000ML/day at Yarrawonga, to identify the potential impacts, mechanisms that mitigate impacts to farming activities due to inundation,	Potentially 30-100 GL/year (as a part of the Murray River integrated constraints	Unknown	NSW (jointly with other jurisdictions)	NSW Murray, Victorian Murray, SA Murray

Project	Description	SDL adjustment ¹	Estimated cost	Proponent	Location
Strategy	from both natural flows and managed delivery of water to environmental assets. This includes investigating a suitable buffer to ensure that landholders are not impacted by unacceptable impacts.	package)			
Murrumbidgee Constraints Management Strategy	Investigates flows up to 40,000ML/day at Wagga Wagga, to identify the potential impacts, mechanisms that mitigate impacts to farming activities due to inundation, from both natural flows and managed delivery of water to environmental assets. This includes investigating a suitable buffer to ensure that landholders are not impacted by unacceptable impacts.	Potentially 10-20 GL/year	Unknown	NSW	Murrumbidgee