

Lower Murray: Locks 8 and 9 Project Overview



About the Sustainable Diversion Limit Adjustment Mechanism (SDLAM)



Wangumma wetland adjacent to Lock 8 River Murray

The Sustainable Diversion Limit Adjustment Mechanism (SDLAM) is a program designed to achieve similar or improved environmental outcomes for rivers, wetlands and wildlife using less water. SDLAM can be achieved through supply or efficiency measures. Supply measures involve improvements to the way rivers are managed, while efficiency measures involve activities to change water use practices, to save water for the environment.

Under the Murray-Darling Basin Plan, states and the Australian Government agreed a package of 36 SDLAM projects across the southern connected Murray-Darling Basin, with the aim of recovering 605 GL of water each year for the river system. NSW is involved in 21 of these projects in the Murray, Murrumbidgee and Darling valleys.

The SDLAM Acceleration Program

To date, 12 of NSW Government's SDLAM projects are complete or nearly complete and are delivering Basin Plan outcomes. The water recovered through these projects is already having positive impacts for Basin communities.

Building on this progress, the NSW Government announced it will bring forward \$330 million worth of its remaining SDLAM projects through the NSW SDLAM Acceleration Program. This program will remove barriers and streamline construction funding arrangements to allow the delivery of five projects, including the Lower Murray: Locks 8 and 9 Project, by June 2024.

For more information on the acceleration program visit dpie.nsw.gov.au/sdlam

About the Lower Murray: Locks 8 and 9 Project

The Lower Murray: Locks 8 and 9 Project focuses on [sustainable diversion limit](#) offsets in the Lower Murray, as part of Water Infrastructure NSW's Sustainable Diversion Limits Adjustment Mechanism program.

It aims to restore and enhance the river habitat across the interconnected Frenchmans Creek and Carrs, Capitts and Bunberoo Creek systems.

The proposed package of works includes:

- changes to operating rules for Weirs 8 and 9 through establishing agreed triggers and scenarios where weirs-pools can be raised or lowered to reinstate a more variable watering regime. This will provide intermittent inundation and exposure of wetlands, aquatic plant beds and floodplain vegetation
- installing regulators and fishways to replace existing fixed crest weirs to return to natural flow variations, which is important for the aquatic habitat in the Carrs, Capitts and Bunberoo Creeks
- restoring fish passage between Lake Victoria and the River Murray through the construction of a fishway at the Frenchmans Creek inlet regulator.

The project will be managed along with other proposed changes in river operations and existing environmental infrastructure and is due for completion by mid-2024.

Project location

The project area is in the lowland reaches of the River Murray between Locks 8 and 9. It incorporates environmental assets associated with Lake Victoria and Frenchmans Creek, the Carrs, Capitts and Bunberoo (CCB) Creek systems in NSW and the Mulcra and Wallpolla Island areas on the Victorian floodplain.

Project benefits

The project will deliver an estimated Sustainable Diversion Limit offset of 17GL/year which includes a long-term reduction in river operational requirement of between 5 and 15 GL/year. The significant environmental benefits contributing to this offset include:

- the promotion of fish growth, breeding and dispersal
- increased habitat use and re-instating seasonal wetting and drying of the wetlands and floodplains
- improved water quality
- reduced water loss through evaporation in summer
- restored habitat and food resources
- the promotion of bird breeding.

Project timeline

	Strategic assessment	Completed
	Project approvals	Mar to Jun 2022
	Third party impact discussions	Jan to Jun 2022
	Contract finalisation	Apr to May 2022
	Proposed construction start date	Jun to Aug 2022
	Project completion	Jun 2024

Millewa pumping station

As part of the Locks 8 and 9 project, Water Infrastructure NSW is working with Lower Murray Water to support pump station renewal works. An existing pump station is located immediately upstream of Weir 9 on the southern bank of the Murray River at Kullnine East, Victoria. The pump station is owned and operated by Lower Murray Urban and Rural Water Authority, and supplies water to the residents and businesses of the Millewa region of northern Victoria. The pump station is approaching the end of its useful life (now outdated in terms of efficiency and reliability) and is not capable of meeting an increased demand in the region.

Designs for the new infrastructure will enable the Lock 9 weir pool to be seasonally raised and lowered to achieve ecological outcomes while continuing to meet the needs of water access licence holders. On completion, the site will become a modern, efficient, high-capacity pump station. The redundant structures associated with the existing pump station will be decommissioned, demolished and removed from the site.

Weir pool manipulation

Locks 8 and 9 weir pool manipulation will provide river operators with flexibility to operate the Murray River according to new operating principles. The new rules will help to achieve:

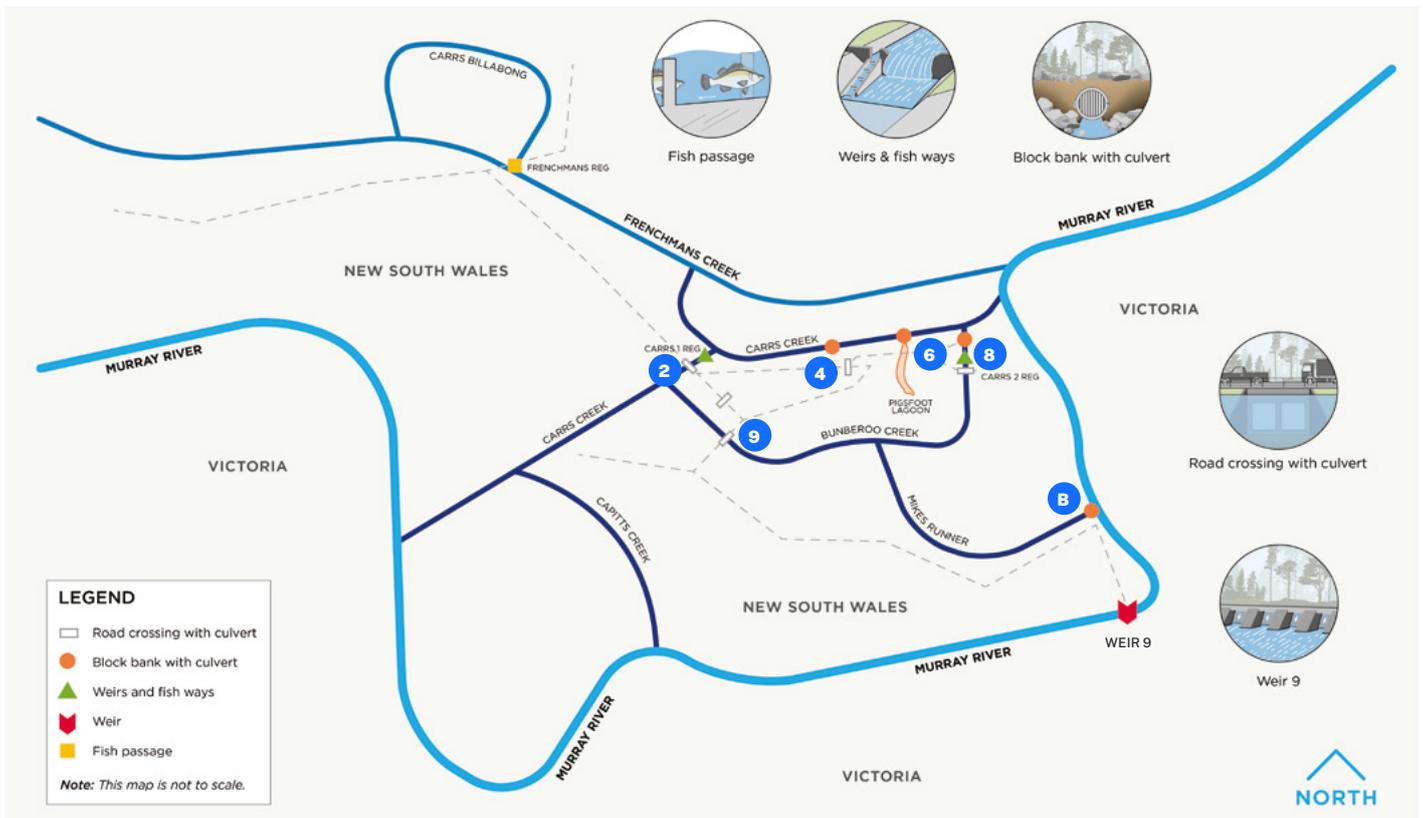
- increased variability of the weir pool heights to reinstate a more variable flow regime
- water savings by lowering the weir pool height during summer and reducing evaporative losses
- restored and enhanced riverine habitat in the Lower Murray and increase ecological condition and diversity.

While these changes may affect the way some stakeholders work within the river's operational environment, they will deliver significant environmental and sustainability benefits for the Lower Murray and downstream connected waterways.



Lock 9 at East Kullnine

Flow regulation and fish passage upgrades



Works proposed within the Carrs, Cappitts and Bunberoo Creeks floodplain have been designed to improve flow regulation and fish passage. Water Infrastructure NSW is proposing to:

- 2 Site 2:** upgrade the existing Carrs 1 weir by installing a new regulator with vehicle access bridge, and a vertical slot fishway. This will allow regulated flows from the Lock 9 weir pool to Carrs Creek via Frenchmans Creek.
- 4 Site 4:** install a new culvert to allow for water transfers to specific wetlands, improved connectivity within the Carrs creeks system and safe vehicle access to Carrs Weir 2.
- 6 Site 6:** update the access track by installing a new reinforced concrete box culvert with vertical gates to restore wetland connectivity while maintaining levels within the creek system which is critical to the efficient storage of water in Lake Victoria.
- 8 Site 8:** upgrade the existing Carrs Weir 2 by installing a new regulator with vehicle access bridge and vertical slot fishway to regulate flows from the Lock 9 weir into Bunberoo Creek and provide improved passage for native fish.
- 9 Site 9:** build a new concrete bridge as the existing causeway restricts the flow of water along Bunberoo Creek. The new bridge will allow improved vehicle access and consistent flow of water downstream, minimising flow restrictions caused by the existing causeway.
- B Site B:** make modifications including a small flow regulator at Mike's Runner Weir to retain Lock 9 water levels and allow the selective release of water into Bunberoo Creek, giving sufficient flexibility to cope with varying water levels.



Engaging with our communities

Community engagement

The project will be managed collaboratively with relevant stakeholders in New South Wales, South Australia and Victoria.

A Stakeholder Advisory Group has been formed to guide the project decision-making process. It includes representatives from key stakeholder groups, local landholders and Traditional Owners.

We will provide ample opportunities for local communities and stakeholders to have their say on projects throughout their stages of development and delivery, and this feedback is used as a key input into project decision making. These opportunities will be listed on the project webpage and on our stakeholder engagement page at industry.nsw.gov.au/water/what-we-do/stakeholder-engagement

Engagement with First Nations people

We recognise and acknowledge the unique relationship and deep Connection to Country First Nations people have as the Traditional Owners and first peoples of Australia. This recognition is highlighted by the imminent transfer of the Tar-Ru Lands under native title to the Barkandji-Maraura people.

The wisdom and experience of local First Nations communities will play a critical role in informing the development of, and approach to, the project. Through the Barkandji Maraura Elders Council the project will provide numerous opportunities to work together in delivering on the objectives of the Tar-Ru Healthy Country Plan.

We have a dedicated engagement team who will guide our engagement with these communities, and we look forward to working with them to deliver real, tangible and broadly accepted outcomes.

More information

For more information on the Lower Murray:
Locks 8 and 9 Project

visit dpie.nsw.gov.au/locks-8-and-9-project

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