

## Nimmie-Caira Infrastructure Modification

March 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 GL<sup>1</sup> 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 the *Nimmie-Caira Infrastructure Modification* supply measure project being proposed by NSW.

The project proposes the reconfiguration of the existing Nimmie-Caira water delivery system and landscape to supply water to the ecological assets of the area more effectively and more efficiently. This is in addition to the original water recovery of 173 GL (Long-term Annual Average Yield) arising from the Commonwealth purchase in 2013 of the land within the Nimmie-Caira project area and associated water entitlements. 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

<b>Location</b>	Lower Murrumbidgee floodplain, located between Maude and Balranald in southern NSW
<b>Type of project</b>	Supply measure involving works and implementation of an improved environmental watering regime to enhance ecological outcomes within the project area
<b>Status</b>	Business case submitted in August 2015 and is being assessed by inter-jurisdictional SDL adjustment advisory committee (SDLAAC).
<b>Estimated SDL adjustment</b>	Potentially 20-50 GL
<b>Related SDL adjustment projects</b>	Murrumbidgee and NSW Murray Valley national parks works Murrumbidgee Computer Aided River Management

### The project area

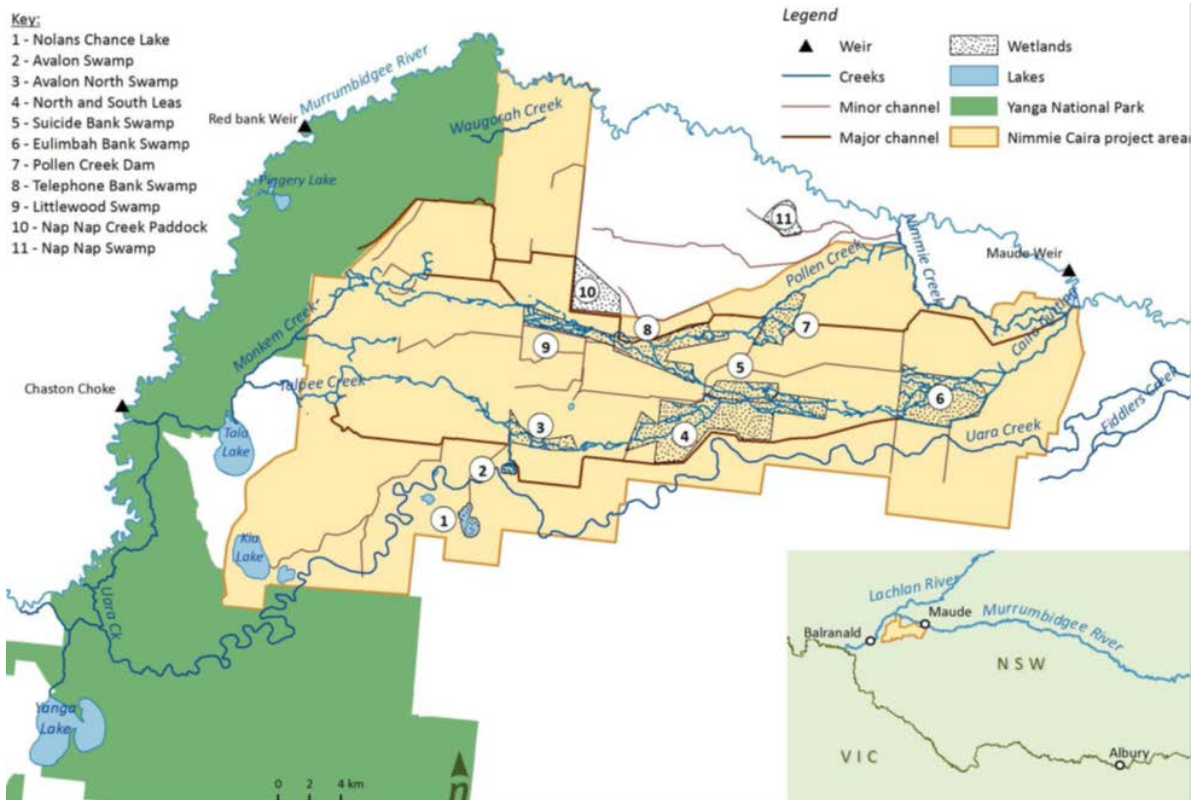
The Nimmie-Caira forms part of the lower Murrumbidgee River system located between Maude and Balranald in southern NSW (Figure 1). It is part of the Lowbidgee floodplain - the largest remaining area of wetlands in the Murrumbidgee Valley. The Nimmie-Caira project area covers about 85,000 hectares of predominantly Lignum wetlands Redgum/Blackbox Woodlands and

<sup>1</sup> 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.

Chenopod Shrublands. The area is a vital component of the Murrumbidgee floodplain and its ecosystems.

The floodplain and wetlands systems within Nimmie-Caira are areas of national and international significance, providing habitat, breeding and nursery grounds for colonial water birds and migratory species listed under international agreements, populations of rare and endangered species of frogs and birds, and endangered and vulnerable plants.

Figure 1: Map showing the location of the Nimmie-Caira project area and key features



## The proposal

This Proposal includes three separate but interconnected elements:

1. Watering the Nimmie-Caira floodplain for environmental benefits within the Government acquired land;
2. Reinstating connectivity to parts of the Nimmie Caira and Uara creek floodplain system, described as the Low-Bidgee, that has been isolated by local irrigation development and reduced occurrence of overbank flow events; and
3. Watering parts of the Redbank South area within Yanga National Park – south of the Murrumbidgee River.

Note: The benefits accruing to the Yanga National Park associated with integrated watering from Nimmie-Caira and improved structures and operations within Yanga National Park will be detailed in the Yanga National Park element of the Murray and Murrumbidgee SDL adjustment business case.

In essence, the project seeks to return the watering of the Nimmie-Caira system back to the lowest lying elements of the landscape. The watering regime which is being implemented focusses on supporting the existing wetland complexes and reinstating the primary flow paths

through the Nimmie and North and South Caira floodplain (the “Base Case” in the SDL adjustment Business Case).

It involves a conversion of the existing floodway-wetland-channel operations developed to support irrigation into a low maintenance, low operational requirements, fill and spill arrangement. The proposed infrastructure reconfiguration:

- Limits the use of the irrigation supply channel system, relying instead on the natural creeks and floodways where possible. Watering strategies will need to ensure that use of these natural delivery systems to supply water to associated wetlands does not result in overwatering of natural channels and floodways. This will minimise ongoing maintenance and operational costs associated with the project; and
- Adapts existing embankments across the existing floodways to focus distribution of water to areas where environmental values are located and where floodplain rehabilitation is most effective.

## Ecological Outcomes

By providing an appropriate watering regime for environmental assets and values, enhanced ecological outcomes can be achieved for:

- existing Lignum, Red Gum and Black Box communities,
- rehabilitation of some Lignum areas that have been lost through irrigation development,
- small and medium sized fish,
- colonial nesting waterbirds, and
- the threatened Southern Bell Frog

## Risks and Impacts

Potential risks associated with the development, construction and operation of the project were assessed as part of the business case development. Four aspects of the project were classified as moderate once mitigation strategies were taken into account. These require additional consideration during the detailed design phase. These are:

- integrated watering of the site and the adjoining Yanga National Park;
- provision of water to Nap Nap Creek Paddock Wetland and to the Fiddlers Creek system;
- system hydrology and hydraulics including the watering of Waugorah Creek, Duck Nest Creek and the Red Gum and Black Box complex; and
- long-term robustness of the works.

Further concept design and hydrological modelling work undertaken as part of the Nimmie-Caira project have confirmed that the project is viable and that these risks can be managed.

## Consultation

Consultation and engagement activities have been underway since the early stages of the project and for parallel environmental watering projects in the area. Communication processes have been established between key agencies, groups and individuals and as a result, cooperation and coordination between parties has been positive.

The governance structure for this project includes an Executive Steering Committee, a cross agency Project Control Group, which monitors progress against the Project Schedule, and a Project Advisory Committee, which draws membership from local Aboriginal groups, Hay and

Murray River local councils and landholder representatives, and provides advice on how the project can best meet overall project objectives.

Broader consultation and community engagement has occurred via the Executive Steering Committee and Project Advisory Group and with the broader community. These arrangements will continue as the Nimmie-Caira project is further developed and implemented.

## Next steps for adjustment mechanism confirmation

Date	Details
<b>30 June 2017</b>	BOC notification of final approved SDL adjustment package
<b>Late October 2017</b>	MDBA public consultation on proposed SDL adjustment
<b>15 December 2017</b>	MDBA recommend SDL adjustment to Commonwealth Water Minister
<b>February 2018</b>	Amendments tabled in parliament
<b>From March 2018</b>	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](http://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>

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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..