



MENINDEE LAKES WATER SAVING PROJECT

Summary of Phase 2 preliminary business case

**Concept design**

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## Foreword

As part of the broader Murray–Darling Basin Plan (the Basin Plan), the Menindee Lakes Water Saving Project seeks to ensure that water is shared sustainably across the Murray–Darling Basin (the Basin) in a way that provides adequate water to both users and the natural environment.

The project aims to do this by reducing evaporative losses, improving the efficiency of the Menindee storages, providing more water to the environment, improving river management and creating positive community impacts.

The project comprises a proposed package of five key categories of works and measures. This summary provides an overview of the proposed works and the rationale for their implementation, the expected benefits, the project history, further works and studies to be completed, project oversight, and forward steps, as set out in the preliminary business case. The preliminary business case confirms that the project is capable of making a valuable contribution to Basin Plan outcomes.

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## Project summary

The Menindee Lakes Water Saving Project presents an opportunity to improve river operations and the environment, whilst also reducing water loss through evaporation in the Menindee Lakes system. Expected benefits from the project include; environmental benefits, flood protection, employment opportunities, water savings and an alternate, secure water supply for Broken Hill.

This is a complex task, which will require a close relationship between government and the community, and appropriate government investment. Provided that the overall objectives, timeframes and cost constraints can be met, the NSW Government will work with the community to design the project in a way that will maximise its benefits.

Under the Basin Plan the project is required to be delivered by 2024.

## Project background

Investigations into how to improve the management of water in the Menindee Lakes have been underway for a number of years. A series of studies were undertaken over the period 2006 to 2013 to assess options to find water savings from the Menindee Lakes, and in 2013 the Commonwealth and NSW governments agreed to further investigate a scope of infrastructure works and other potential options to lift recreational amenity and environmental benefits whilst realising savings by addressing evaporative loss from the Lakes.

The Murray–Darling Basin Ministerial Council agreed to the current proposed project being included in a package of projects under the Sustainable Diversion Limit Adjustment Mechanism on 16 June 2017.

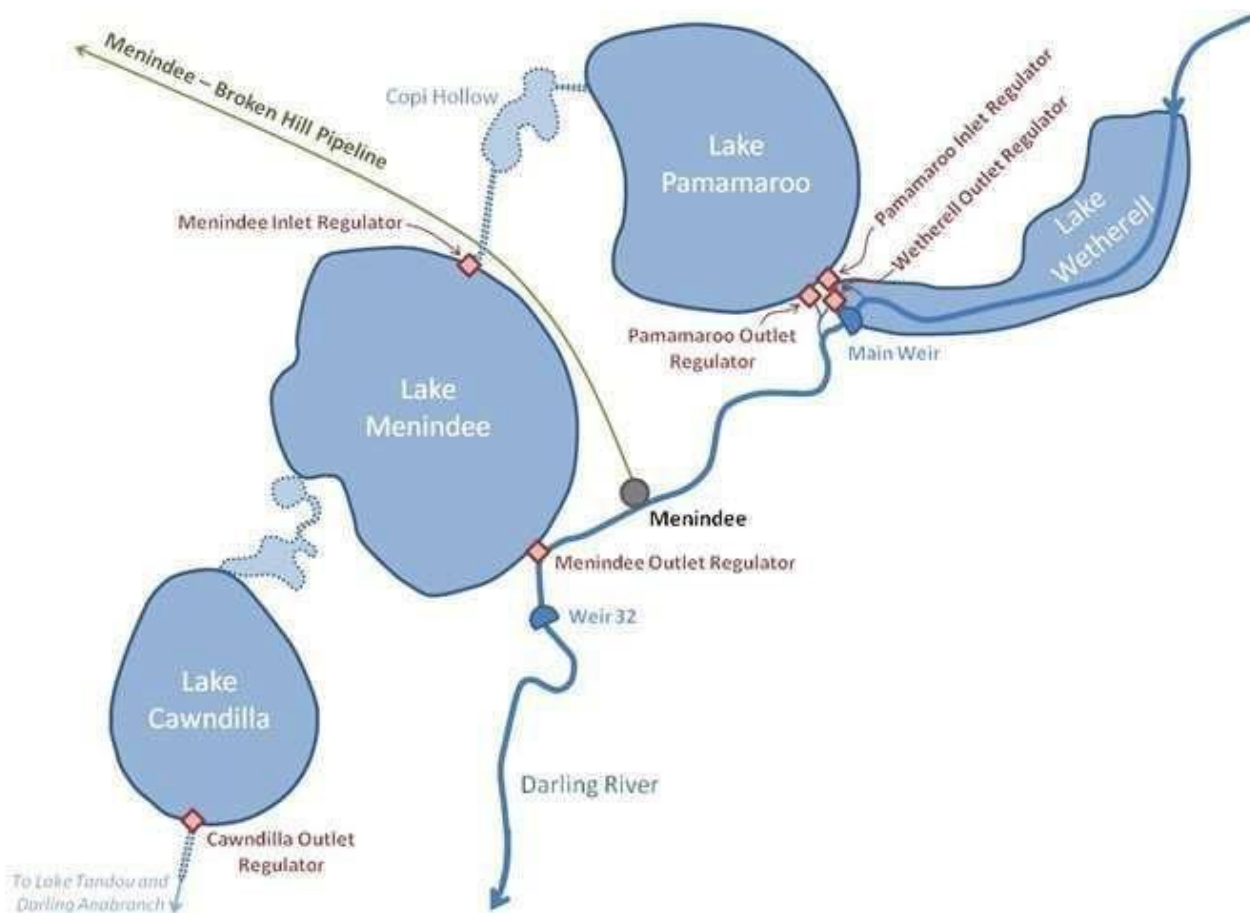
### The Menindee Lakes system

The Menindee Lakes are a naturally occurring series of shallow wetlands located along the Lower Darling River, approximately 200 kilometres upstream of the junction with the Murray River at Wentworth. The lakes are naturally ephemeral, which means they would be typically dry but would fill with water for brief periods following rainfall. The Menindee Lakes were modified in the 1960s to be able to provide water storage to Broken Hill and other users in the Murray–Darling system, and to supply towns<sup>1</sup> and irrigators along the Lower Darling and Murray rivers.

The regulated storage system at Menindee consists of four main interconnected lakes. Of these, three are modified natural depressions (Lakes Pamamaroo, Menindee and Cawndilla), while the fourth (Lake Wetherell) is an artificial lake along the main river channel formed by the construction of Menindee Main Weir. A channel was also built to connect Lakes Pamamaroo and Menindee (via Copi Hollow), while the other connections between the lakes are modified natural channels. There are seven main regulating structures in the lakes system as shown in Figure 1.

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<sup>1</sup> Menindee, Broken Hill, Silverton and Pooncarie



**Figure 1 Schematic diagram showing regulating structures in the Menindee Lakes system**

As well as being a significant source of water for local towns and users, the lakes are also located in an area of environmental, social and cultural significance and provide recreational, tourism and economic opportunities for the towns and surrounding region. The Menindee Lakes system contains a broad diversity of both terrestrial and aquatic flora and fauna including threatened species and nationally important wetlands.

### Current management and operation of the Menindee Lakes system

Since their modification, the Menindee Lakes have generally been operated to maximise the storage volumes, water quality, and ability to supply users, and to minimise evaporation and mitigate floods where possible.

Since the 1990s operations have also focused on providing ecological benefits, managing flood mitigation for the Lower Darling to provide environmental benefits, controlling foreshore erosion, and minimising erosion of cultural heritage sites.

The Menindee Lakes storage is owned and operated by New South Wales with a long standing arrangement under the Murray Darling Basin Agreement. This Agreement requires the Murray Darling Basin Authority (the MDBA) to include the water held within the lakes as part of the shared resource of the River Murray System, and use the water in the lakes when the volume is above 640 GL until it next falls below 480 GL.

Once the total volume of the lakes falls below 480GL, the held water is no longer considered a shared resource of the River Murray System and the water is managed by New South Wales to meet local demands. Some of the water within the Menindee Lakes system is considered dead storage and cannot be accessed for release. The dead storage volume within the system is 125 gigalitres.

The construction and commissioning of the “Wentworth to Broken Hill pipeline” will enable town water supplies for Broken Hill to be provided from the River Murray instead of from the Menindee Lakes.

To ensure critical water supply needs can be met during periods of low inflows as well as to minimise evaporative water losses, Lakes Wetherell and Pamamaroo are preferentially used to store water ahead of Lakes Menindee and Cawndilla. In most instances, water released to meet immediate consumptive demands comes initially from Lake Menindee, then Lake Cawndilla and Lake Wetherell.

As in other catchments, water is supplied according to the order of priority of licences, particularly during periods where water availability is limited and use may need to be restricted to protect water for critical needs. This protection of stored water can become particularly crucial as water volumes drop, as evaporative losses become more significant and water salinity increases.

In an extended period of low inflows, levels of salinity can make the water in the Lakes unsuitable for irrigation or town water supply regardless of availability. It does however remain an important refuge habitat for aquatic and terrestrial fauna until the next major inflow.

During periods of flood, the Lakes are operated to maintain the structural integrity of existing infrastructure, to maintain the security of existing water entitlements, and to minimise damage to downstream properties where possible.

Inflows are managed based on a series of considerations including water quality, levee bank stability and pre-releases to mimic a more natural flow pattern. Water can also be transferred from Lake Menindee to Lake Victoria in the Lower Murray under a ‘harmony operation’ if flows in the Lower Murray are not meeting consumptive and environmental demands for water. Water for additional dilution flow procedures can also be called from the Lakes during periods of storage excess.

## Project context—Murray–Darling Basin Plan

The Menindee Lakes Water Saving Project is being developed as one of the sustainable diversion limit (SDL) adjustment mechanism projects under the Murray-Darling Basin Plan (the Basin Plan), which seeks to ensure that water is shared sustainably across the Murray-Darling Basin (the Basin) in a way that provides adequate water to both users and the natural environment.

In developing the Basin Plan, the MDBA assessed the volume of water that could be taken from the Basin for consumptive use while maintaining the health of the Basin. This volume is called the long-term average SDL and is equal to 10,873 gigalitres per year. In order to reach this level of water take, the MDBA determined that an additional 2,750 gigalitres of surface water would need to be recovered from the existing level of use through a combination of efficiency projects and licence buy-backs.

The Menindee Lakes Water Saving Project has been put forward as a supply measure proposal under the SDL adjustment mechanism. A supply measure is a project which will offset the amount of water required to be recovered under the Basin Plan, by providing equivalent or improved environmental outcomes using less water.

The Menindee Lakes are located in a semi – arid area and are shallow in nature with a large surface area, resulting in a significant loss of water to evaporation. On average the Menindee Lakes lose 426 gigalitres of water annually to evaporation. Up to 700 gigalitres can be lost to evaporation annually when the lakes are full.

Each lake also contains a percentage of ‘dead storage’ that cannot be accessed for consumptive use, and may therefore also be lost to evaporation. This “dead storage” is estimated at 125 gigalitres for the four main lakes.

If evaporative water loss from the Menindee Leakes could be reduced, significantly more water could be made available for the environment.

Regulation of the lakes has increased sedimentation, reducing accessibility of water, and has also altered the flow regime in the Lower Darling, reducing the frequency of overbank flow events and freshes.

There are a range of ecological targets associated with the flow regime for the Lower Darling floodplain that are currently difficult to meet because of existing operational constraints including regulator capacities and operational policy, and the need to ensure reliability of local town water supply.

Altering the existing operational strategies and creating new or modified infrastructure has the potential to address many of these issues, while providing water savings to meet NSW's commitments under the Basin Plan.

## The Menindee Lakes Water Saving Project

The Menindee Lakes Water Saving Project is a package of proposed works and measures that together present an opportunity to deliver better river operations, and improved environmental and socio-economic outcomes and water efficiencies.

Modelling of the SDL package of projects by the MDBA in October 2017 found that their implementation would result in the equivalent of 605 gigalitres of water being made available for the environment, with the Menindee Lakes Water Saving Project an important component of this total by improving the management and efficiency of the Menindee Lakes.

The project seeks to achieve significant water savings by:

- allowing the operation of Lake Menindee independently of Lake Cawndilla, and ceasing to use Lake Cawndilla for water storage in all but the wettest years
- potentially considering alternative options for water security in the Lower Darling
- potentially permitting faster drawdown of water in Lake Menindee, including providing access to residual water
- enlarging the outlet structure and constructing a drainage channel in the bed of Lake Menindee
- increasing flexibility of supply by preferentially retaining water in the more efficient Lakes Wetherell and Pamamaroo
- accommodating higher managed flows in the Lower Darling through works to:
  - limit breakouts onto the floodplain and into dry lakes and anabranches
  - protect private infrastructure from being impacted by higher flows, including changed operational rules to complement structural works.

Through the proposed works and measures, the project will also make significant contributions to overcoming system constraints and improve the ability for operators to achieve higher flow events in the Lower Murray.

The detailed plan for design and implementation of these changes has not been confirmed as the project is still in concept stage. Input from stakeholders and community members will be critical to the successful delivery of the project as it works through design and implementation stages.



## Proposed works and measures

Table 1 provides a summary of five categories of works and measures proposed as part of the Menindee Lakes Water Saving Project. While each carries costs and benefits, the works are intended to interact collectively as a single package and should be considered as such.

**Table 1 Summary of proposed works and measures**

Type	Measure	Known as	Feature	Basin Plan outcomes
Infrastructure works	Measure 1	Enlarged Menindee Outlet Regulator	Capacity increased from 5,000ML/day up to 14,000ML/day to enable more efficient drawdown.	SDL adjustment supply measure Constraints management
	Measure 2	Lake Menindee Drainage Channel	Construction of drainage channel to feed outlet and improve discharge up to 14,000ML/day. Also allows access to residual water.	SDL adjustment supply measure
	Measure 3	Morton-Boolka Regulator	New regulator to control releases to and from Lake Menindee and Lake Cawndilla up to 14,000ML/day. Allows Lake Menindee to be operated independently of Lake Cawndilla.	SDL adjustment supply measure
	Measure 4	Old Menindee Town Weir removal	Removal of redundant weir to improve Menindee Outlet Regulator flows.	SDL adjustment constraints measure
	Measure 5	Lower Darling Channel Capacity – Emu Lake Offtake Regulator	Increased flows up to 14,000ML/day in Darling channel from higher Menindee discharge – offtake regulator prevent escape flow into Emu Lake.	SDL adjustment supply measure and constraints measure
	Measure 6	Lower Darling Channel Capacity – Yartla Lake Offtake Regulator	Increased flows up to 14,000ML/day in Darling channel from higher Menindee discharge – offtake regulator prevent escape flow into Yartla Lake.	SDL adjustment supply measure and constraints measure
	Measure 7	Cawndilla Creek Regulator	Enable isolation of Cawndilla Creek when Lake Menindee draining. Regulator up to 14,000ML/day. Enables managed use of Lake Cawndilla as a storage option and to reduce evaporative losses.	Environmental mitigation
	Measure 8	Anabranh Offtake Regulator	Update existing upstream Anabranh offtake regulator to supply regulated flow when needed up to 14,000ML/day and reduce high flow losses when regulator is closed.	SDL adjustment supply measure and constraints measure
	Measure 9	Anabranh E-flow Regulator and Road Bridge	Update existing downstream Anabranh environmental offtake regulator to control up to 1,000ML/day.	Environmental mitigation
	Measure 10	Menindee Main Weir Fish Passage	Works to facilitate fish passage at Menindee Main Weir.	SDL adjustment supply measure
	Measure 11	183 Dam Regulator, Road Bridge and Fishway	Increased flows up to 14,000ML/day in Darling channel from higher Menindee discharge – new regulator, existing road bridge, new fish passage.	SDL adjustment supply measure and constraints measure
	Measure 12	Menindee Flood Protection	Construction of Menindee town high flow levee bank as flood protection measure for residents.	SDL adjustment constraints measure
	Measure 13	Lower Darling Constraints Mitigation Works	Works to existing pumps and infrastructure to allow continued stock and domestic access and some irrigation access.	SDL adjustment constraints measure

Type	Measure	Known as	Feature	Basin Plan outcomes
Structural Adjustment measure	Measure 14	Acquisition of Lower Darling & Webster Ltd (Tandou) entitlements	<p>Reduce high security irrigation demand from the Lakes through acquisition of remaining high security water access licences in the Lower Darling.</p> <p><b>Update on Business Case information</b> The Commonwealth purchased the Webster Ltd entitlements of almost 2.2 GL on 21 June 2017</p> <p>Further work on potential options to reduce high security demand (irrigation, town water supply and stock and domestic) has been undertaken and provided to the Commonwealth. Additional analysis of infrastructure options is being commissioned by NSW. Discussions with affected landholders on these options will commence shortly.</p>	SDL adjustment supply measure
Changes to institutional arrangements	Measure 15	Menindee System Control Transfer and Storage Drawdown	Lake Wetherell drawdown to establish water reserve for riparian use in Lower Darling for up to 12 months. MDBA to assume full control of Lakes from NSW pending confirmation of volume reserved, how released and by whom. Proposed storage reserve 80 GL.	SDL adjustment supply measure
	Measure 16	Broken Hill Entitlement	Town Water Supply entitlement shifted to River Murray at Wentworth. The Wentworth to Broken Hill Pipeline and associated plant are currently in testing and road reinstatement stage, with expected completion to be April 2019.	SDL adjustment supply measure
	Measure 17	Cawndilla Additional E-flows	<p>Lake Cawndilla retired for water storage but will periodically fill during natural high flow events for short periods to retain environmental values.</p> <p>The operating strategy for Lake Cawndilla will be designed to improve environmental outcomes. Environmental Water portfolios will only be required if the environmental watering differs from the final agreed operating strategy for Lake Cawndilla, e.g. Retention of water for longer periods or slower drawdown of the lake.</p>	Environmental mitigation
	Measure 18	River Murray Improved Operations	Recalibration of modelling to capture full extent of SDL supply benefits from the project and confirm changes to River Murray Operations Framework.	SDL adjustment supply measure
	Measure 19	Lake Wetherell (floodplain) drying cycle	Restore natural hydrologic profile through reinstatement of drying cycles.	Environmental mitigation
Concurrent measures	Measure 20	Broken Hill Town Water Supply Alternate Supply	<p>Long-term water supply to Broken Hill will be secured with a pipeline from the River Murray at Wentworth.</p> <p>The Wentworth to Broken Hill Pipeline and associated plant are currently in testing and road reinstatement stage, with expected completion to be April 2019.</p>	SDL adjustment supply measure
Other measures	Measure 21	Northern Basin Inflows	Recognition of additional Northern basin inflows to Menindee Lakes from Basin Plan environmental recovery.	SDL adjustment supply measure

Type	Measure	Known as	Feature	Basin Plan outcomes
	Measure 22	Lower Darling Temporary Trade	Limited temporary general security trade to the Lower Darling subject to resource assessment.	Dealing rule

## Preliminary benefits

The Menindee Lakes Water Saving Project presents an opportunity to save a substantial amount of water otherwise lost to evaporation while contributing to improvements in river operations, the environment and consequently passing on benefits to the community.

### Water Savings

The Murray–Darling Basin Authority’s detailed hydrological modelling of the project suggests there will be average, long-term water savings of around 106 gigalitres per year, made up of around 93 gigalitres in evaporative savings, and 14 gigalitres in Lower Darling delivery losses due to the reduction of high security water demand in this river. The evaporative savings are in part owing to the Cawndilla Creek Regulator allowing the managed use of Lake Cawndilla for environmental outcomes and separate operations for the rest of the Menindee Lakes system.

These savings will make more water available to achieve environmental outcomes without the need to recover additional water from productive uses, avoiding socioeconomic drawbacks.

### Environmental benefits

The Menindee Lakes Water Saving Project is expected to result in environmental benefits due to infrastructure works, which will allow the lakes system to be operated in ways that support environmental outcomes. These include:

- The enlarged size of the Lake Menindee outlet regulator, the new Emu and Yartla lakes offtake regulators, and the increased capacity of the Anabranche offtake regulator will increase the frequency and duration of small overbank flows to sustain and improve floodplain health.
- These works will also allow increased river flows into the Lower Darling, potentially contributing to increased flows in the River Murray and helping to deliver environmental benefits for a range of ecosystems.
- The construction of new fishways will allow upstream and downstream movement for native fish and other biota, which will allow them to access a wider range of habitat over a larger area and contribute to the distribution and abundance of the species.
- The proposed changes in operation strategies will reinstate the natural drying cycles of the Lake Wetherell floodplain and restore more natural conditions.

### Flood protection

High-flow levee banks will be constructed to protect Menindee residences located close to the Darling River, such as those at Sunset Strip. The levee banks will reduce the need to evacuate during times of flooding and provide greater flexibility in managing flood events as they pass through the Menindee Lakes system, improving flood mitigation capacity.

### Employment opportunities

The Menindee Lakes Water Saving Project will provide employment opportunities in the Menindee Lakes region during the period of delivery, particularly during the detailed design and construction phases. In particular, the project will support the NSW Government policy of seeking greater participation by Aboriginal people in government construction projects.

## Alternative water supply for Broken Hill

As part of a parallel project, the NSW Government has committed to providing an alternative town water supply for Broken Hill. The selected solution to provide long-term water security for Broken Hill is the construction of the Wentworth to Broken Hill Pipeline, which will transfer water from the Murray River to Broken Hill via a route paralleling the Silvery City Highway. The pipeline is currently under construction. Further information on the Broken Hill pipeline can be found on the WaterNSW website at [www.watersw.com.au/projects/murray-to-broken-hill-pipeline](http://www.watersw.com.au/projects/murray-to-broken-hill-pipeline)

## Stakeholder and community engagement

Early consultation with stakeholders and the community continues and has raised a number of concerns, which will be addressed as part of the ongoing development of the Menindee Lakes Water Saving Project.

Issues and concerns have been put forward by entitlement holders, Lower Darling irrigators, landholders on the Great Darling Anabranch, community members, local Indigenous people and Traditional Owners. In summary, these concerns broadly relate (but are not limited) to:

- risks to security of supply
- impacts on the ecology of the Lower Darling and Darling Anabranch
- impacts on environmental values arising from the current operation of the lakes
- loss of amenity at the lakes due to reduced water levels and perceived impacts on local employment
- impacts on the condition of surrounding recreation areas, including Copi Hollow, Sunset Strip and Kinchega National Park
- undervaluing of the local environment relative to downstream environments
- unequal treatment of evaporation at Menindee Lakes as opposed to other areas
- damage to cultural heritage and special areas for local indigenous people and Traditional Owners, including through environmental damage.

Stakeholder input on these and other issues will be sought throughout the detailed design of the project. This includes governance, regulatory and targeted engagement through activities such as stakeholder advisory panels, public information sessions and formal submission processes for the development of the EIS, the final business case and any amendments to relevant water sharing plans.

Stakeholders and riparian landholders directly impacted by the proposed relaxation of flow constraints will be asked to participate in property level agreements to manage impacts. Commercial negotiations regarding structural adjustment will take place directly with affected parties.

## Environment and heritage

The Menindee Lakes Water Saving Project design to date has been informed by earlier environmental and cultural heritage studies, which are outlined in the following sections. Further studies will be completed before the project is implemented.

## Environmental studies

There have been several large-scale environmental investigations into the Menindee Lakes system, including assessment of potential impacts to the Lakes, Lower Darling River and Great Darling Anabranch from proposed water savings measures. These studies include:

- the Ecologically Sustainable Development Project, 2000
- an environmental impact statement, 2005
- the Menindee Water Savings Project, Ecological Status and Scoping, 2014.

A further study on the ecological effects of changed hydrology in the Darling Anabranch, known as The Darling Anabranch Adaptive Management Monitoring Program 2014–19, is currently underway. It will provide additional information on the ecology of the study area particularly in the Great Darling Anabranch.

In addition, in conjunction with stakeholders, the Department is currently developing a water resource plan (WRP) for the NSW Murray and Lower Darling, as required by the Basin Plan. This WRP will incorporate the current *Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources*, an environmental watering plan and a range of other resources. The plan will be consistent with the sustainable diversion limit and include tools and mechanisms to manage environmental risks.

Information from all of these previous studies and projects will be used to inform the proposed project at Menindee Lakes. However, as the exact nature of the proposed changes at Menindee have changed over time, further work will need to be completed to ensure that all risks are adequately considered. In addition, as the Menindee Lakes Water Saving Project will consist of state significant Infrastructure it will need to be approved by the Minister for Planning.

To avoid duplicating earlier work and to ensure that the works fulfil the statutory obligations for environmental and heritage impact assessment under NSW planning legislation, a two stage process for initiating further work is proposed to be followed:

1. A scoping study will be completed to collate all existing information, confirm the proposed operating regime of the new scheme configuration, complete a preliminary qualitative assessment of benefits and impacts, and establish the extent of general and specialist studies required.
2. An environmental impact statement (EIS) will be guided by the scoping study and planning requirements set out by the Director-General of the Department of Planning and Environment.

The final EIS will then be used to inform the detailed design of the project.

## Cultural heritage

The Menindee Lakes and surrounding floodplains have been occupied by Aboriginal people in the region for at least 47,000 years. The area is part of the Aboriginal cultural landscape and contains many sites of Aboriginal cultural heritage significance. A total of 442 registered Aboriginal sites are located within the proposed project area and are protected under Section 90 of the NSW *National Parks and Wildlife Act 1974*.

The proposed project will impact the lakes and the surrounding floodplains and will potentially impact Aboriginal cultural heritage values. Lake Cawndilla is the most affected area of the proposed project and includes the largest number of registered Aboriginal sites.

Although many sites are likely located above the current full supply level and unlikely to be affected by reducing the water volume present in Lake Cawndilla, there are noted to be a range of potential impacts (both positive and negative) on cultural heritage items and sites within the area:

- A decrease in water levels may lead to further unearthing and destruction of archaeological material through wind erosion.
- Lower water levels may be beneficial to scarred trees.
- A marked decrease in total inundation may have a beneficial effect on Aboriginal cultural heritage located within the shoreline by reducing shoreline erosion.
- A recurring increase in artificially raised water levels may create inundation and further impact archaeological deposits through shoreline erosion from inundation.
- Wave erosion created by increasing and decreasing water levels may further damage and reposition archaeological deposits around the lunettes, lake margins and banks.
- The high density of burials and artefact scatters surrounding the lake will be particularly impacted by an increase in water levels.

Appropriate means of managing these potential impacts will need to be determined as part of the detailed design of the project.

## Project delivery

The Menindee Lakes Water Saving Project is expected to be completed in mid-2024. The broad timeframes for the phased delivery of the project, including earlier stages, are shown in Table 2. Note that these dates have been updated since the preliminary business case was completed in June 2017.

**Table 2 Phased delivery of Menindee Water Saving Project**

Project phase	Description	Estimated completion date
Phase 1	Draft business case—options report	August 2016
Phase 2a	Interim project proposal (modelling instructions)	April 2017
Phase 2b	Preliminary business case—Phase 2 submission	June 2017
Phase 3	Establish governance, confirm project staging and secure initial funding	June 2019
Phase 4a	<p>Planning and approvals—all activities required to take the project to the point of construction/implementation— EIS(s), further studies, property level negotiations for constraints relaxation, structural adjustment, basis for design</p> <p>This will also include NSW Treasury approval for significant infrastructure under their “gateway” process.</p>	May 2021
Phase 4b	Detailed design and construction—implementation of all construction works and other measures through to commissioning and handover	June 2024

NOTE: Dates and description of what is covered in some project phases have been updated from the preliminary business case.

The implementation timeframe is primarily influenced by the environmental planning and approvals processes including stakeholder engagement, and the conditions at the time of construction, that is whether the Lakes are dry or inundated. A conservative approach has been used to estimate completion timeframes in order to accommodate these possibilities.

The Menindee Lakes Water Saving Project schedule in Table 3 lists milestones for the project along with an estimated completion timeframe. These dates have also been updated since the June 2017 Phase 2 business case.

**Table 3 Project schedule of estimated milestones**

Milestone	Estimated completion date
Phase 4a—Planning and approvals	
<ul style="list-style-type: none"> <li>Detailed project plan</li> </ul>	June 2019
<ul style="list-style-type: none"> <li>Concept design</li> </ul>	March 2020
<ul style="list-style-type: none"> <li>Planning approvals</li> </ul>	May 2021
<ul style="list-style-type: none"> <li>Expression of interest</li> </ul>	October 2021
<ul style="list-style-type: none"> <li>ECl and finalise tender documentation</li> </ul>	January 2022
<ul style="list-style-type: none"> <li>Request for tender and award contract to successful proponent</li> </ul>	May 2022
Phase 4b—Detailed design and construction	
<ul style="list-style-type: none"> <li>Detailed design</li> </ul>	December 2022
<ul style="list-style-type: none"> <li>Construction and testing</li> </ul>	May 2024
<ul style="list-style-type: none"> <li>Commissioning and handover</li> </ul>	June 2024

## Project costs

In total, the cost of the Menindee Lakes Water Saving Project (excluding structural adjustments) is currently estimated to be \$151.8 million, with the main components being direct infrastructure costs, non-construction project costs and contingencies.

## Conclusion

This document provides a summary of the Phase 2 preliminary business case for the Menindee Lakes Water Saving Project. This summary is designed as a living document for further stakeholder input and for the documenting of project progress and will be further updated when additional data becomes available.

The proposed Menindee Lakes Water Saving Sustainable Diversion Limit Adjustment Mechanism Project Intergovernmental Working Group will continue to provide the necessary governance framework for the agreement on those elements of the proposal which have the potential to affect the Murray–Darling Basin Agreement and other jurisdictions.

The preliminary business case confirms that Menindee Lakes is capable of making a valuable contribution to Basin Plan outcomes.