

MID-MURRAY STORAGE PROJECT

SEPTEMBER 2007

ENVIRONMENTAL

BACKGROUND

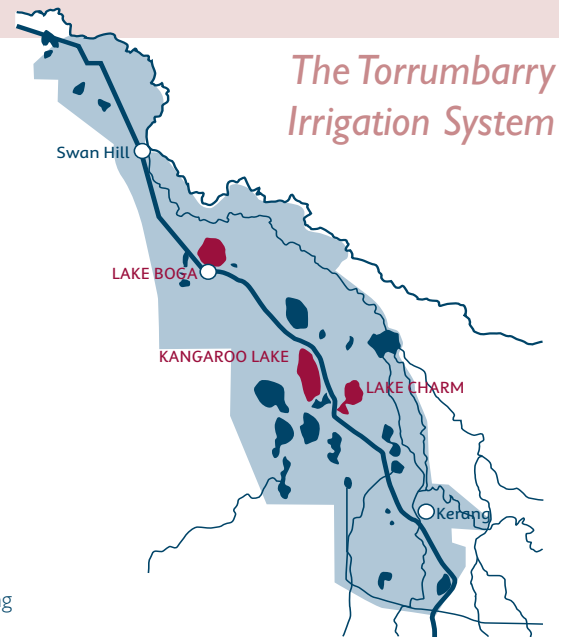
Lake Boga, Lake Charm and Kangaroo Lake are part of a complex system of wetlands, rivers and man-made infrastructure between Kerang and Swan Hill. Much of this lake system, including Lake Charm and Kangaroo Lake, is used for irrigation water supply through the Torrumbarry Irrigation System (TIS) - an extensive, interlinked system of channels, lakes, weirs and streams. Until the mid 1960s Lake Boga was used for water storage supply as part of the TIS, but it currently relies on floodwaters from the Avoca River and rain rejection flows from the TIS for its inflows.

Lake Charm and Kangaroo Lake are part of the Kerang Lakes Ramsar site - recognised as an internationally significant wetland system with multiple uses and values. The Kerang Lakes site comprises 23 wetlands and covers 9,419 hectares. The wetland system provides habitat for fauna including waterbirds and native fish. Eleven species

of state and national significance have been recorded, or have been predicted to occur. The lakes also support introduced fish such as European Carp. The most predominant terrestrial and aquatic weed species in the region are Boxthorn, Willow and Spiny Rush.

As in many parts of Australia, a number of Indigenous heritage sites occur around these lakes. Lake Charm is moderately saline with salinity typically between 3,500 and 4,000 EC, whereas the indicative long term average salinities at Kangaroo Lake and Lake Boga are around 400 EC and 2,000 EC respectively.

The landscape around the three lakes has been heavily cleared for irrigated agriculture. The proposed routes of the Kangaroo Lake floodway and Lake Boga outfall channel are moderately to heavily disturbed due to existing channel construction and agricultural activity.



WHAT WILL HAPPEN TO THE ENVIRONMENT OF THE LAKES?

A range of environmental investigations have been undertaken during the planning phase and as part of the environmental assessment of the project. The proposed changes in water regimes are not expected to have any significant impact on the three lakes' environment. These changes are not expected to have any significant impacts on the permanent fresh water habitat. The project, which takes in two of the 23 wetlands in the Ramsar site, is not expected to affect the representativeness of the site, nor have a significant impact on its ecological character.

The water regime changes may alter the littoral environment of Lake Charm, with a minor risk of encroachment of a weed species (Sharp Rush) in the areas of the lake exposed for longer periods each year (approximately 2% of wetland area). This species may spread seasonally as the outside edge is exposed but is likely to be drowned by subsequent inundation. Monitoring will identify if more active management is needed in the future.

In addition to the water supply benefits and the improved environmental flows, the project will also help to:

- reduce salinity levels in several lakes over the long term due to flushing from the increased through flow in the system;
- improve water quality in the lakes again from the greater volume of water flowing through the system; and
- provide more surety of water levels for recreational, social and tourism activities.

The new outlet infrastructure works for the storage have been sited in areas which have been subject to extensive disturbance from past agriculture and water infrastructure. The construction of these works can be managed to have minimal impact on the environment.



Water bird at Lake Charm Photo - Tom Lowe

MID-MURRAY STORAGE PROJECT

HOW WILL THE PROPOSED CHANGES AFFECT THE ENVIRONMENT OF THE LAKES?

The establishment and operation of the Mid-Murray Storage will change water management at the three lakes in terms of fluctuations in water level.

Water levels in the lakes will remain within the existing agreed operating ranges. The three lakes will generally be filled during the period from May to November each year with water released during the following irrigation season.

The project will make more effective use of the available storage capacity in each lake.

‘...*minimal impact on the environment*’



Swamp Harrier clutching duck Photo – Tom Lowe

MANAGING THE ENVIRONMENT

In the future, the Lake will typically have higher water levels during the Christmas holiday break over December and January than has been experienced in the past. Flows would be discharged from Lake Boga during the peak irrigation demand months, commencing in January - February.

This change in operating regime provides a virtual guarantee of water supply to a minimum level of 67.0m AHD around March of each year, and a maximum of 69.5 m AHD at the end of November. The actual drawdown rate to the minimum level will be developed to provide the optimum outcome in terms of demand, water quality, erosion and salinity requirements. Early releases down to a level below 69.0m AHD before Christmas are a possibility.

A number of local tourist operators and business owners were interviewed and all believed the proposed options would have a positive effect on tourism and the local economy.

Under this new operating regime, the probability of the lake drying up as it did in 2000 is extremely rare, which further instills confidence in tourism and the economy of the area.

MID-MURRAY STORAGE PROJECT OVERVIEW

- The Mid-Murray Storage Project will contribute up to 19,000 megalitres of water annually to the Snowy River.
- Uses more existing storage capacity of Lake Boga, Lake Charm and Kangaroo Lake.
- “Through flows” in the Lakes keeps the environment healthy.
- Lake Boga will continue to benefit from recreation and tourism.
- A viable irrigation system – providing a more reliable water supply and improving profitability for irrigators.
- Improved water quality in the Lakes.
- Cost sharing opportunities for local irrigators.
- For more information, see Overview Fact Sheet.

FURTHER INFORMATION

Other fact sheets available on the website are:

- Project Overview
- Overview of the Torrumbarry Area
- Lake Boga
- Lake Charm
- Kangaroo Lake

Abbreviations used in this fact sheet

ML = megalitres

ML/d = Megalitres per day

AHD = Australian Height Datum

‘...*a positive effect on tourism and the local economy.*’