

Construction and other activities

The Living Murray was established in 2002 in response to evidence that the health of the River Murray system is in decline. The Living Murray's first stage focuses on improving the environment at six 'icon sites' along the River.

The sites were chosen for their high ecological value—most are listed as internationally significant wetlands under the Ramsar¹ convention—and also their cultural significance to Indigenous people and the broader community. They are:

- Barmah-Millewa Forest
- Gunbower-Koondrook-Perricoota Forest
- Hattah Lakes
- Chowilla Floodplain, Lindsay-Wallpolla Islands
- Murray Mouth
- River Murray Channel.

Currently, projects are being undertaken at each of these sites under The Living Murray's environmental works and management program. The program's objectives are to make the best possible use of water currently in the River Murray system and to optimise the benefits of environmental water recovered through The Living Murray.

These projects are at various levels of development, from feasibility studies to construction work at various sites. Examples of current projects are detailed below.

Re-snagging and river bank restoration

Snags are important to native fish and aquatic animals as shelter from currents, refuge from predation and as important feeding and spawning sites. Snags often serve as nursery areas for young fish and are particularly important in the lifecycle of Murray Cod and Trout Cod.

Through The Living Murray, snags are being returned to selected areas of the River Murray between Hume Dam and Yarrawonga in the largest re-snagging program undertaken in Australia.

During the 1970s and 1980s, about 25 000 snags were removed from this part of the river to improve water flow and navigation. We now know that this was too many snags to remove, and may have contributed to the decline in native fish numbers.



Snags ready to be returned to the River Murray.

Photo: NSW DPI

Around 5000 snags will be returned under the current project over the next three years to three high priority areas covering around 35 km of river length. The areas have been selected to maximise the habitat benefits for native fish while minimising the impact on flooding, river bank erosion and recreational water users.

Flow management structures

Regulators are structures with gates that can be opened or closed to allow controlled flooding and drying of wetlands to mimic natural conditions. This helps to increase the amount of habitat available for breeding of waterfowl and native fish, while carp screens on the regulators limit the number of carp entering the wetlands to spawn and feed.

The Lindsay-Wallpolla system

Regulators are being constructed at the entrances to the largest wetlands on Lindsay and Wallpolla Islands in north-west Victoria. Under current river regulation, these wetlands are flooded for long periods of time. This has reduced the size and diversity of important habitat types and encouraged pest species such as carp.

Works are also underway at Lake Wallawalla, a large, flat lake at the south end of Lindsay Island. Currently, the lake receives inflows later in the season than natural and the floods are of a shorter duration and cover a smaller area. Dry periods between floods are longer and more frequent.



Horseshoe Lagoon regulator.

Photo: SA Water

By raising the embankment and increasing the size of the regulators at the lake entrance, higher water levels can be retained in the lake for longer periods of time. This will help to improve the condition of River Red Gums and provide conditions and habitat for successful breeding of birds and native fish.

Gunbower Forest

Works have been completed on four water regulators at Gunbower Forest in north-central Victoria, including the construction of one new regulator and the refurbishment of three existing regulators. Currently, flooding of the forest is less frequent and of shorter duration than would naturally occur.

Refurbishment of the existing regulators will allow diversion of water into the forest wetlands during high flows in the River Murray and retention of water as the river flows decrease.



Gunbower Forest flooded through regulation.

Photo: Sandra Volk

Many other works are planned to make the best use of available environmental water in the River Murray system, and improve the ecological values of The Living Murray icon sites. A few examples of future works include constructing:

- a regulator and channel to deliver water to the Koondrook-Perricoota forests in New South Wales
- a weir on Chowilla Creek to flood high priority areas of the Chowilla floodplain in South Australia
- fishways at the Barrages and River Murray main weirs to provide continuous fish passage from the sea to Hume Dam
- regulators and a pumping station at Hattah Lakes in Victoria to deliver environmental water to the lakes during dry periods and retain water in the lakes after flood events.

Other fact sheets in this series

- Our unique icon sites
- Protecting and improving the icon sites
- Market-based water recovery
- Infrastructure improvements to recover water
- Communities and The Living Murray
- Local government and The Living Murray.

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¹ *Ramsar* is an international treaty that focuses on the conservation of internationally important wetlands. The convention was signed in 1971 at a meeting in the town of Ramsar, in Iran.

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