



Australian Government



The Living Murray

FACT SHEET: ENVIRONMENTAL WATERING UPDATE

THE NEED FOR ENVIRONMENTAL WATERING

The unprecedented drought conditions over the past seven years have contributed to a general decline in the fauna and flora across the Murray Darling Basin region, including The Living Murray Icon Sites. Inflows into the Murray River system have remained well below average, and have followed record low inflows. Only 16.96 gigalitres (GL) of environmental water was allocated to the environment from July 2007 to June 2008. This consisted of 12.8 GL of environmental water carried over from the previous year and 4.16 GL allocated against The Living Murray water recovery measure.

Due to the deepening drought, the water demands of icon sites were greater than the small volume of water that was available. Criteria, reflecting the drought conditions, were established to prioritise the icon site demands to best utilise the limited amount of environmental water. Water was targeted to avoid the loss of threatened species, limit irretrievable damage or catastrophic events and provide drought refuges at localised sites within the icon sites and other parts of the Murray River system.

ENVIRONMENTAL WATERING PROGRESS

Millewa permanent wetlands

The Barmah-Millewa Forest Icon Site is Australia's largest river red gum forest and one of The Living Murray's six icon sites. Small, permanent wetlands in the Millewa Forest were refilled with 125 ML of environmental water to provide critical refuge for the threatened southern pygmy perch. In the absence of data supporting the presence of species at the site, no further watering was undertaken. Ongoing protection of the species in the Barmah-Millewa Forest Icon Site will concentrate on applying learnings from this action to the remaining population in the Gulf Creek in Barmah Forest.

Gunbower wetlands

The Gunbower-Koondrook-Perricoota Forest icon site is an important breeding place for waterbirds and native fish. The Living Murray program delivered 7.7 GL of environmental water, including 5.7 GL of the Victorian flora and fauna entitlement, to provide drought refuge for colonial



waterbirds, frogs and native fish, including Murray cod. Monitoring results have shown increased activity by aquatic and woodland birds, breeding of tortoises and frogs, as well as the presence of at least five native fish species.

Wakool River system

Recent surveys have highlighted the importance of the Wakool River system as a habitat and spawning ground for native fish, including Murray cod and silver perch. In May 2007 inflows from the Murray River ceased and over the next six months the Wakool River became a series of disconnected waterholes. The declining quality of waterholes placed pressure on plants and animals, and several fish kills were reported in late 2007. Between November 2007 and March 2008 The Living Murray program delivered 6 GL of environmental water to the Wakool system along with 28 GL of NSW stock and domestic replenishment flow. By coordinating these flows, both replenishment of waterhole refuges for native fish and access to stock and domestic water by landholders was accomplished.

Chowilla Floodplain and Lindsay-Wallpolla islands

The Chowilla Floodplain and Lindsay-Wallpolla islands icon site is an internationally significant semi-arid floodplain ecosystem. Like other floodplain sites along the Murray River, this icon site has been severely impacted by river regulation and drought. In autumn 2008 9.28 GL of environmental water, including 3 GL of the Victorian flora and fauna entitlement, was delivered to protect the benefits of previous investment in environmental watering and protect critical habitat for plants and animals. River red gums, many of which would have otherwise died without provision of this water, have already responded to the watering with new growth. Twenty two bird species and six frog species have also been recorded at monitoring sites, including the endangered southern bell frog. Despite encouraging localised responses from watering, it should be noted that the area watered is less than 2% of the total area of the icon site.

Banrock Station wetland

The Banrock Station wetland, located in South Australia's Riverland, was disconnected from the Murray River in January 2007 as a drought water-saving measure. Although the wetland did not become dry until March 2007, the surrounding vegetation had not been flooded for over two years. This resulted in rising saline groundwater that posed a significant threat to vegetation, with more than 30% of the river red gum community already severely stressed. The Living Murray program delivered 617 megalitres (ML) of environmental water, which was supported by an additional

215 ML from Hardy Wines. The water delivery began in June 2008 to recharge soil moisture and protect critical plant and animal habitats. Monitoring has shown that the surface water quality has improved, river red gums close to the wetland have shown signs of new growth and three frog species have been recorded at the wetland.

Wetlands below Lock 1 on the Murray River

Due to the drought conditions wetlands below Lock 1 progressively became disconnected as water levels dropped. In late 2007, based on scientific assessment, five sites that had been disconnected were identified as being at high risk of becoming acidified if not watered urgently. Acting upon this advice, 1.5 GL of water was delivered to these five wetlands in early 2008. Monitoring has shown an improvement in water quality and vegetation at these wetlands. Bird and frog breeding has also occurred, including the threatened southern bell frog. As water levels continue to drop below Lock 1, most wetlands below Lock 1 have become disconnected from the river. These wetlands are currently being assessed for acid sulfate soils. Preliminary results indicate these are also at risk of acidification..

KEY OUTCOMES

Despite the small quantity of The Living Murray water available for environmental watering in 2007-08, monitoring has shown a positive ecological response in those small areas of icon sites where water was applied, especially at sites that had been previously watered.

In the Chowilla and Lindsay-Wallpolla Icon Site many river red gums, some that are hundreds of years old, would have otherwise died without this small volume of environmental water. These trees are now responding with new growth. Experience from previous environmental watering at icon sites has shown that follow-up watering is required to protect this investment.

Coordinating flows, such as that undertaken in the Wakool system, can provide benefits to both landholders and the environment and achieve dual benefits. The 6 GL of The Living Murray environmental water, combined with the 28 GL of NSW stock and domestic replenishment flow, was able to provide landholders with access to water for stock and domestic use while also replenishing waterhole refuges for native fish.

FURTHER INFORMATION



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