

Environmental Impact Summary Report 2018-19

	2018-19 Summary of Outcomes	
Watering Metrics	Number of Watering Events	4
	Number of Wetlands watered	8
	Area of Wetlands watered (ha)	74.4 ha
	Volume of water delivered (ML)	
	<ul style="list-style-type: none"> • Fund Donated Water • Commonwealth Environmental Water 	657 ML 60 ML
	Total Volume	717 ML

2018-19 Seasonal Conditions

At the time of developing the FY19 Annual Watering Plan, the forecast for the 2018-19 season was for a moderate season which triggered a 30% water donation allocation, equivalent to ~ 2700 ML. However, as the year progressed, the actual conditions in the Basin were equivalent to those experienced in a Very Dry year category which triggers a 10% donation, equivalent to ~ 900 ML. As a result of the changes in the seasonal conditions and the resultant impacts on ability to deliver water, the Environmental Water Trust undertook a mid-year adjustment to the water donation volume and delivery targets.

Wetlands Receiving Water in 2018-19

Yambuna Lagoon

130 ML of the Environmental Water Trust water was delivered to Yambuna Lagoon in Victoria between October 2018 and April 2019 with the aim to:

- maintain health of Rushy Riverine Swamp and Riverine Swamp Forest Ecological Vegetation Classes (EVCs);
- maintain threatened flora species;
- provide areas of aquatic habitat for fauna, including birds and frogs; and
- maintain health of culturally significant trees.



As a result of the watering, the following outcomes were recorded.

- The 2018-19 environmental watering of Yambuna Lagoon resulted in 23 flora species each being identified within both the Rushy Riverine Swamp and Riverine Swamp Forest EVCs.
- During the spring environmental watering event the threatened plant River Swamp Wallaby-grass *Amphibromus fluitans* was located within both the Rushy Riverine Swamp (August 1% cover) and Riverine Swamp Forest (November 20% cover) EVC monitoring quadrats.
- The number of waterbirds and waterbird species diversity fluctuated throughout the two environmental watering events with 33 individuals and five species recorded prior to the spring water delivery, followed by a decline as the wetland dried, and numbers peaking immediately after water delivery in autumn (30 individuals).
- Two threatened species were recorded on Yambuna Lagoon during the environmental watering events - Eastern Great Egret *Ardea modesta* and Royal Spoonbill *Platalea regia*.

Recommendations for future water delivering and monitoring based on the outcomes from the 2018-19 environmental watering events:

- Repair breaches in inlet channel so that water delivered is directed to the western end of wetland rather than spilling out into the eastern end of the wetland.
- Establish and monitor two vegetation monitoring quadrats within the grazed area to determine impacts of grazing on flora diversity and cover of Water Couch.

O’Kane’s Swamp

70 ML of the Environmental Water Trust water was delivered to O’Kane’s Swamp in Victoria between October 2018 and April 2019 with the aim to:

- maintain health of Rushy Riverine Swamp and Riverine Swamp Forest ecological vegetation classes (EVCs);
- maintain threatened flora species;
- provide areas of aquatic habitat for fauna, including birds and frogs; and
- maintain health of culturally significant trees.



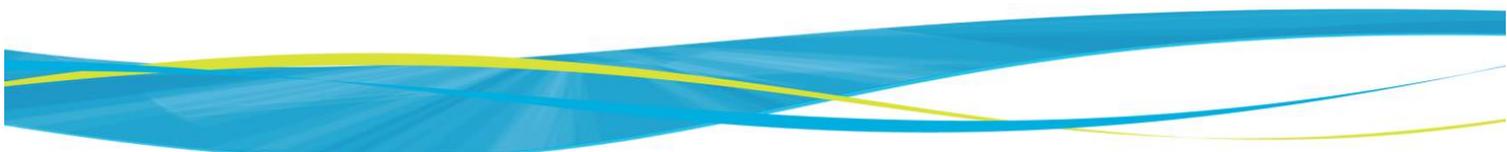
O’Kane’s Swamp pre-watering



O’Kane’s Swamp 12 weeks post-watering

As a result of the watering, the following outcomes were recorded.

- The number of waterbirds and waterbird species diversity increased from zero prior to the late autumn 2018 watering event to seven species and 220 individuals six weeks following the water delivery. After the early autumn 2019 environmental water delivery, the number of waterbird individuals and species peaked in May 2019 (145 individuals, five species) and August 2019 (133 individuals, eight species).
- Two individual Masked Lapwings were observed nesting with three eggs during August 2019.
- One threatened species was recorded on two occasions on O’Kane’s Swamp during watering events - Australasian Shoveler *Anas rhynchos*.



Recommendations for future water delivering and monitoring based on the outcomes from the 2018-19 environmental watering events:

- If water is available in 2019-20 deliver water to the site in both spring and autumn (topping up as required) to continue to improve the habitat quality of the wetland and manage terrestrial weeds.

Wingillie Station

457 ML of the Environmental Water Trust water and 60 ML of water from the Commonwealth Environmental Water Holder was delivered to Wingillie Station wetland complex in NSW between September 2018 and February 2019 with the aim to:

- maintain health of River Red Gum-warrego grass-couch grass riparian tall woodland;
- maintain health of Black Box woodland with a Chenopod understorey;
- maintain health of Lignum shrubland;
- provide habitat for Southern Bell Frog;
- provide habitat for waterbirds;
- support land manager in rehabilitating wetlands; and
- maintain health of culturally significant trees.



As a result of the watering, the following outcomes were recorded.

- 34 waterbird species were recorded across the wetlands on Wingillie Station, with a total of 2,293 waterbirds recorded across six wetlands from September to April.
- Environmental water created a variety of wetland habitats which provided suitable foraging habitat for a range of waterbirds including ducks, cormorants, herons, rails, waders and terns.
- Listed threatened species recorded included the Freckled Duck *Stictonetta naevosa*, White-bellied Sea Eagle *Haliaeetus leucogaster* and Regent Parrot *Polytelis anthopeplus*.
- The nationally Vulnerable Southern Bell Frog *Litoria raniformis* were recorded in one of the six wetlands watered on Wingillie Station.
- Native plant species dominated the ground cover at all four of the vegetation quadrats.
- The nationally Endangered Murray Hardyhead *Craterocephalus fluviatilis* were successfully reintroduced to the Little Frenchman's Creek with watering managed for salinity levels to favour their success.

Recommendations for future water delivering and monitoring based on the outcomes from the 2018-19 environmental watering events:

- Undertake an initial assessment and design of permanent infrastructure to replace block banks. The establishment of permanent infrastructure will allow for more efficient management of environmental water deliveries and flood flows.
- Manage water approvals to ensure
- Re-establish historical block banks on tracks to improve the management of environmental water within the Roly Poly Lake wetland complex (i.e. wetlands 451, 467, 481, 3954 and 3955).

This report provides an update on the outcomes achieved through the donations of water and cash from the Murray Darling Basin Balanced Water Fund under its constitution. The donations are made to the Environmental Water Trust, which has engaged the Murray Darling Wetlands Working Group to deliver environmental watering services with scientific oversight and review provided by The Nature Conservancy.