

Variation to table 5.2.14 of the Seasonal Watering Plan 2022-23. **Proposed amendments are shown in red.**

**Table 5.2.14 Potential environmental watering actions, expected watering effects and associated environmental objectives for the lower Murray wetlands.**

Potential environmental watering action	Expected watering effect(s)	Environmental objective(s)
Brickworks Billabong (top-up in spring, top-ups as required over summer/autumn)	<ul style="list-style-type: none"> <li>Maintain water levels (target water level between 30.8 m Australian Height Datum [AHD] and 31.6 m AHD) to inundate benthic herblands including ruppia beds to provide nursery habitat for Murray hardyhead and provide high levels of aquatic productivity</li> <li>Maintain water quality suitable for Murray hardyhead</li> <li>Provide shallow-water habitat and exposed mudflats to support foraging and resting of waterbirds including migratory waterbirds</li> </ul>	
Catfish Billabong (top-up <b>winter/spring</b> / <b>summer/autumn</b> )	<ul style="list-style-type: none"> <li>Fill to 33.5 m AHD to inundate fringing woodland vegetation to improve condition and recruitment</li> <li>Allow water level to draw down over summer and autumn to:               <ul style="list-style-type: none"> <li>promote the growth of a range of aquatic macrophytes that favour different water depth and inundation patterns, and</li> <li>provide suitable foraging conditions for wading shorebirds.</li> </ul> </li> <li>Maintain water levels above 30.8 m AHD to maintain permanent habitat for large-bodied and small-bodied native fish.</li> </ul>	
Heywood's Lake (fill in autumn)	<ul style="list-style-type: none"> <li>Fill to 56.8 m AHD to inundate fringing black box community to stimulate growth and flowering to improve condition and recruitment</li> <li>Provide a range of temporary open-water and shallow-water habitats to trigger the growth of various aquatic macrophytes and provide feeding and breeding opportunities for a variety of waterbirds.</li> </ul>	
Koorlong Lake (fill in spring, top-ups as required)	<ul style="list-style-type: none"> <li>Increase and maintain the water level (target between 36.7m AHD and 38.0 m AHD) to support the growth of salineaquatic vegetation including ruppia to provide nursery habitat for Murray hardyhead and provide high levels of aquatic productivity</li> <li>Maintain water levels within a 30 cm range to provide feeding resources for shorebirds and to maintain the Murray hardyhead population</li> </ul>	

Potential environmental watering action	Expected watering effect(s)	Environmental objective(s)
Lake Carpul (fill in spring)	<ul style="list-style-type: none"> <li>• Provide a range of open-water, shallow-water and emergent-vegetation habitats for water-dependent birds to support breeding and feeding opportunities</li> <li>• Inundate and wet outer fringing river red gum, black box, lignum and vegetation communities (target 52.23 m AHD) to improve their condition</li> <li>• Mobilise carbon and nutrients within the wetland to support wetland processes</li> </ul>	
Lake Hawthorn (fill in spring, top-ups as required)	<ul style="list-style-type: none"> <li>• Target water level between 33 m AHD and 33.3 m AHD to: <ul style="list-style-type: none"> <li>○ Increase and maintain water levels to encourage the germination and growth of ruppia to provide nursery habitat for Murray hardyhead and visitation by shorebirds</li> <li>○ Maintain water levels within a 30 cm range to provide feeding resources for shorebirds and to maintain the Murray hardyhead population</li> </ul> </li> </ul>	
Lake Powell (fill in spring)	<ul style="list-style-type: none"> <li>• Provide a range of open-water, shallow-water and emergent-vegetation habitats for water-dependent birds, to support breeding and feeding opportunities</li> <li>• Inundate and wet fringing river red gum, black box, lignum and vegetation communities (target 51.05 m AHD) to improve their condition</li> <li>• Mobilise carbon and nutrients within the wetland to support wetland processes</li> </ul>	
Little Heywood's Lake (fill in autumn)	<ul style="list-style-type: none"> <li>• Fill to 56.8 m AHD to inundate fringing black box community to stimulate growth and flowering to improve condition and recruitment</li> <li>• Provide a range of temporary open-water shallow-water and emergent vegetation habitats to provide feeding and breeding opportunities for a variety of waterbirds</li> </ul>	
Nyah Floodplain (fill in autumn)	<ul style="list-style-type: none"> <li>• Inundate the base and littoral zone of Parnee Malloo Creek (target 63.2 m AHD) to support plant communities</li> <li>• Improve the condition of vegetation communities to provide a range of habitats and feeding and breeding resources for birds and frogs</li> <li>• Inundate the floodplain adjacent to Parnee Malloo Creek to promote the growth of herb and shrub layers</li> <li>• Inundate river red gum to improve their condition</li> <li>• Mobilise carbon and nutrients to promote chemical and biological processes</li> </ul>	

Potential environmental watering action	Expected watering effect(s)	Environmental objective(s)
Robertson Creek (top-up in <b>spring</b> <b>autumn</b> ) 	<ul style="list-style-type: none"> <li>Wet fringing river red gum, black box, lignum and vegetation communities (target 30.4 m AHD) to improve their condition</li> <li>Provide lateral spread of freshwater to refresh local groundwater to support the condition of trees not directly inundated</li> <li>Provide a range of open-water, shallow-water and inundated lignum habitats, to provide waterbird feeding opportunities and help protect the highly culturally significant site in the adjacent landscape</li> </ul>	 
Robertson Wetland (partial fill in spring)	<ul style="list-style-type: none"> <li>Wet fringing river red gum, black box, lignum and vegetation communities (target 28.4 -28.8 m AHD) to improve their condition</li> <li>Inundate cane grass beds to improve their condition and resilience</li> <li>Provide a range of open-water, shallow-water and inundated lignum habitat to provide waterbird feeding opportunities</li> </ul>	 