Variation to Tables 5.7.3 and 5.7.4 of the *Seasonal Watering Plan 2021-22*

Proposed changes are shown in red text

Table 5.7.3 Potential environmental watering actions, expected watering effects and associated environmental objectives for the Boort wetlands

Potential environmental watering action	Expected watering effects	Environmental objective(s)
Lake Boort (partial fill in autumn) TO icon	• Prime the wetland for spring watering in 2022-23 by breaking the dormancy of aquatic vegetation propagules so they can grow and reproduce • Grow zooplankton and waterbug communities to provide winter feeding conditions for waterbirds and frogs • Reduce the volume of water required to fill the wetland in spring 2022- 23 • Support the growth of culturally significant plants on the wetland fringe including spiny flat sedge and river red gum	• Frogs • Vegetation • Waterbird
Lake Meran (fill in winter/ spring)	• Wet soils around the wetland fringe that have been dry for the last two seasons, to encourage a boom in zooplankton and macroinvertebrate productivity enhancing food resources for waterbirds and turtles • Provide moisture to maintain mature trees in the intermittent swampy woodland on the wetland fringe • Provide deep, open water to maintain refuges for freshwater turtles (in particular Murray River turtles), support the feeding of deep-water foraging waterbirds and support the breeding of colonial nesting birds	• Turtles • Vegetation • Waterbirds
Lake Meran (fill in autumn)	• Reach a target fill height of 81.4m AHD to water mature trees (river red gums) on the higher banks of the wetland fringe, supporting their survival and resilience • Control weeds in the outer wetland fringe • Support the growth of aquatic and semi-aquatic plants	• Vegetation
Lake Meran (top-ups, as required to maintain water level between 77.3 m Australian Height Datum [AHD] and 77.8 m AHD)	• Increase the water depth to maintain an appropriate water temperature for aquatic animals and provide a refuge for freshwater turtles, waterbirds and fish • Provide dry areas (above 77.8 m AHD) to promote the growth and increase the extent of herbland vegetation around the wetland fringe	• Fish • Turtles • Vegetation • Waterbirds
	• Increase water depth around the wetland fringe to promote the germination and	• Frogs • Vegetation

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Lake Leaghur (fill in winter/spring) TO icon	recruitment of fringing vegetation (such as river red gums and cane grass) • Support the growth of aquatic and semi-aquatic plants • Provide increased habitat area and grow zooplankton and waterbug communities to provide food resources for frogs and waterbirds	• Waterbirds

Table 5.7.4 Potential environmental watering for the Boort wetlands under a range of planning scenarios

Planning scenario	Drought	Dry	Average	Wet
Expected conditions	• No natural inflow to wetlands	• Minimal natural inflow to wetlands from local catchment run-off possible	• Periods of high flow combined with localised catchment contributions, which are expected to provide minor inflow to wetlands	• Extended durations of high flow and overbank flow from creeks and flood runners, which fill most wetlands
Predicted supply of water for the environment[1]	• 3,403-7,183 ML	• 6,100 ML	• 6,678 ML[2]	• 9,804 ML
Potential environmental watering – tier 1 (high priorities)	**Tier 1a (can be achieved with predicted supply)**			
	• Lake Meran (top-ups)	• Lake Meran (top-ups) • Lake Leaghur (fill) • Lake Leaghur (top-up, if triggered)	• Lake Meran (top-ups) • Lake Leaghur (fill) • Lake Leaghur (top-up, if triggered)	• Lake Boort (partial fill) • Lake Meran (fill in winter/spring) • Lake Leaghur (fill) • Lake Leaghur (top-up, if triggered) • Lake Meran (fill in autumn)
	Tier 1b (supply deficit)			
	• Lake Boort (partial fill) • Lake Leaghur (fill) • Lake Leaghur (top-up, if triggered)	• Lake Boort (partial fill)	• Lake Boort (partial fill) • Lake Meran (fill in winter/spring [instead of top-ups]) • Lake Meran (fill in autumn)	• N/A
Potential environmental watering – tier 2 (additional priorities)	• N/A	• Lake Meran (fill [instead of top-ups])	• N/A	
Possible volume of water for the environment required to achieve objectives	• 2,500 ML (tier 1a) • 7,200 ML (tier 1b) • 0 ML (tier 2)	• 4,900 ML (tier 1a) • 4,500 ML (tier 1b) • 3,500[3] ML (tier 2)	• 4,900 ML (tier 1a) • 8,000[3] ML (tier 1b) • 0 ML (tier 2)	• 12,800[4] ML (tier 1a) • 0 ML (tier 1b) • 0 ML (tier 2)

1 Loddon system entitlements are shared between the Loddon River system and the Boort wetlands. The expected availability referenced in this table is an estimate of remaining supply after the Loddon River tier 1a demands and critical carryover requirements have been removed.

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2 Large increases in tier 1a demands in the Loddon River system under average conditions will likely result in the available supply for the Boort wetlands being similar to the dry scenario.

3 Demand for Lake Meran is in addition to tier 1a.

4 While the demand is in excess of available supply, it is expected that some of the fill events will be at least partially met with natural inflows under a wet climate scenario.

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