















Variation to the Seasonal Watering Plan 2024-25




















This variation was made to Section 5.2.6 Lower Murray Wetlands of the Seasonal Watering Plan 2024-25 by the VEWH Commission on 22 October 2024.

Variation to tables 5.2.14 and 5.2.15 of the Seasonal Watering Plan 2024-25

Amended changes are shown in red text























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

Potential environmental watering action	Expected watering effects	Environmental objectives	
Bidgee Lagoons (top up in spring)	<ul style="list-style-type: none"> Inundate adjacent river red gum and black box communities to stimulate growth and flowering to improve their condition and extent Provide conditions and water levels (to target 52.4 m AHD) to support the growth of aquatic and emergent vegetation and promote the diversity of emergent vegetation communities Provide feeding and breeding opportunities for frogs and habitat for fish species Mobilise leaf litter to promote carbon and nutrient cycling 	A1 	CN1 
		F2 	V1, V2 
Bottle Bend Wetlands (fill in spring)	<ul style="list-style-type: none"> Provide soil moisture to maintain and improve the health of adjacent black box (to target water level 36.5 m AHD) Provide conditions to support growth of aquatic and emergent vegetation Provide feeding and breeding opportunities for frogs Maintain feeding and nesting opportunities of non-colonial waterbirds. 	A1 	B1 
		V1, V2 	
Brickworks Billabong (fill in spring/summer, then as required)	<ul style="list-style-type: none"> Recreate wetland habitat to support Murray hardyhead populations (to target water level 31.6 m AHD) Re-establish and improve extent and coverage of <i>ruppia</i> to provide nursery habitat for Murray hardyhead and provide high levels of aquatic productivity Manage salinity within an acceptable range for Murray hardyhead and <i>ruppia</i> Provide shallow-water habitat and exposed mudflats to support foraging and resting waterbirds, including migratory waterbirds 	B1 	F1 
		V1 	
Bridge Creek (includes Bridge Creek wetland) (fill in spring)	<ul style="list-style-type: none"> Provide soil moisture to maintain and improve condition of riparian and floodplain vegetation (to target water level 56.5 m AHD), specifically river red gum, black box and lignum. Increase dissolved organic matter, particulate matter and macroinvertebrate productivity. Provide shallow-water habitat to provide feeding habitat for wetland-dependent species including frogs and birds. 	A1 	B1 
		CN1 	V1, V2 

		<ul style="list-style-type: none"> Stimulate aquatic vegetation growth Provide conditions for semi-aquatic lakebed herbland to establish during drawdown 		
Brown Swamp (Pound Bend) (fill in autumn)		<ul style="list-style-type: none"> Inundate and wet outer fringing lignum and vegetation communities (to target water level 47.0 m AHD) to improve their condition Inundate adjacent river red gum communities to stimulate growth and flowering to improve their condition and extent 	V2 	
Bullock Swamp North (partial fill in spring) 		<ul style="list-style-type: none"> Provide soil moisture to maintain and improve condition of streamside and floodplain vegetation (to target water level 38.5 m AHD), specifically black box and lignum. Provide feeding opportunities for waterbirds Provide lateral spread of fresh water (to target level 38.5 m AHD) to refresh local groundwater which will support condition of surrounding black box trees not directly inundated and improve condition of the swamp 	B1 	V2 
Burra Creek North (fill in autumn)		<ul style="list-style-type: none"> Provide soil moisture to maintain and improve condition of riparian and floodplain vegetation, specifically river red gum, black box and lignum. Provide habitat through improved vegetation communities and water resources for birds, and frogs Mobilise leaf litter to promote carbon and nutrient cycling 	A1 	B1 
Burra Creek South (fill in autumn)			CN1 	V2 
Burra Creek South Proper (fill in autumn)				
Koorlong Lake (top ups in spring, then as required)		<ul style="list-style-type: none"> Increase and maintain the water level (the target water level is between 36.7 m AHD and 38.0 m AHD) to support the growth of saline aquatic vegetation, including ruppia, to provide nursery habitat for Murray hardyhead and provide high levels of aquatic productivity Maintain water levels within a 1.3 m range to provide feeding resources for waterbirds and to maintain the Murray hardyhead population 	B1 	F1 
			V1 	
Lake Carpul (fill in winter/spring 2024) ¹ 	Part B: July – Nov 2024	<ul style="list-style-type: none"> Provide a range of open-water, shallow-water and emergent-vegetation habitats for water dependent species including frogs and birds to support breeding and feeding opportunities Stimulate aquatic vegetation growth during inundation Inundate and wet outer fringing river red gum, black box, lignum and vegetation communities (the target water level is 55.05 m AHD at Lake Powell, 52.23 m AHD at Lake Carpul) to maintain and improve their condition Provide conditions for semi -aquatic lakebed herbland to establish during drawdown Mobilise carbon and aid nutrient cycling within the wetland to support wetland processes 	A1 	B1 
Lake Powell (fill in winter/spring 2024) ² 	Part B: July – Nov 2024		CN1 	V1, V2 
Lake Hawthorn (top ups in spring, then as required)		<ul style="list-style-type: none"> Maintain water level between 33 m AHD and 33.3 m AHD to encourage the germination and growth of saline aquatic vegetation, including ruppia, and provide mudflat and shallow-water feeding habitat 	B1 	V1 

¹ This potential watering action is Part B of a watering action that commenced in 2023-24.

² This potential watering action is Part B of a watering action that commenced in 2023-24.

	for shorebirds			
Musk Duck Wetland (fill in spring-summer, top up in summer and autumn as required, and deliver fish attractant flow in June) 	<ul style="list-style-type: none"> Provide habitat for survival and development of larval and juvenile native fish Stimulate growth of aquatic vegetation within the wetland and increase soil moisture to surrounding riparian vegetation. Provide habitat and food for frogs and waterbirds 	A1 	B1 	
		F2 	V1, V2 	
Neds Corner Floodplain ³ (fill in autumn) 	<ul style="list-style-type: none"> Provide a range of open-water, shallow-water, and emergent vegetation habitats for wetland-dependant species including frogs and birds and support breeding and feeding opportunities Stimulate aquatic vegetation growth during inundation Provide soil moisture to maintain and improve condition of riparian and floodplain vegetation, specifically Black box Provide conditions for semi-aquatic lakebed herbland to establish during drawdown. 	A1 	B1 	
Neds Corner Lagoon ⁴ (fill in autumn) 			V1, V2 	
Old Tip Wetland ⁵ (fill in autumn) 				
Nyah Floodplain (fill in autumn)	<ul style="list-style-type: none"> Inundate the base and littoral zone of Parnee Malloo Creek (target 63.2 m AHD) to support aquatic and semi-aquatic plant communities Improve the condition of vegetation communities to provide a range of habitats and resources for birds, and frogs Inundate floodplain adjacent to the Parnee Malloo Creek to promote growth of herb and shrub layers Inundate river red gum to maintain and improve their condition Mobilise carbon and nutrients to promote chemical and biological processes 	A1 	B1 	
			CN1 	V1, V2 
Outlet Creek (Karadoc Swamp) (fill in spring)	<ul style="list-style-type: none"> Provide soil moisture to maintain and improve condition of riparian and floodplain vegetation, specifically River red gum, Black box, and Lignum Provide suitable habitat for native frog species Provide open-water habitat as feeding and breeding habitat for waterbirds. 	A1 	B1 	
			V2 	
Vinifera Floodplain (fill in autumn)	<ul style="list-style-type: none"> Inundate the soils (target 63.2 m AHD) to support aquatic and semi-aquatic plant communities Improve the condition of vegetation communities to provide a range of habitats and resources for birds, and frogs Inundate floodplain to promote growth of herb and shrub layers Inundate river red gum to maintain and improve their condition Mobilise carbon and nutrients to promote chemical and biological processes 	A1 	B1 	
			CN1 	V1, V2 

³ In previous seasonal watering plans, this wetland has been watered as part of Neds Corner Central. It is one of three wetlands at this site, Old Tip Wetland, Neds Corner Floodplain and Neds Corner Lagoon.

⁴ In previous seasonal watering plans, this wetland has been watered as part of Neds Corner Central. It is one of three wetlands at this site, Old Tip Wetland, Neds Corner Floodplain and Neds Corner Lagoon.

⁵ In previous seasonal watering plans, this wetland has been watered as part of Neds Corner Central. It is one of three wetlands at this site, Old Tip Wetland, Neds Corner Floodplain and Neds Corner Lagoon.

Table 5.2.15 Potential environmental watering for the lower Murray wetlands system under a range of planning scenarios

Planning scenario	Drought	Dry	Average	Wet
Expected conditions	<ul style="list-style-type: none"> Natural flow in the Murray River is too low to connect to wetlands Very low rainfall year-round and extremely hot and dry conditions in summer/autumn cause substantial wetland drying Wetlands rely on the delivery of water for the environment 	<ul style="list-style-type: none"> Short periods of high flow in the Murray River are possible, but overbank flow to wetlands is unlikely; low rainfall and very warm summer/autumn Wetlands rely on the delivery of water for the environment 	<ul style="list-style-type: none"> Sustained periods of high flow in the Murray River in late winter and early spring may wet some low-lying wetlands, but most wetlands will rely on water for the environment Local rainfall may be high and provide run-off to some wetlands 	<ul style="list-style-type: none"> Lengthy periods of high flow and floods with major spills from storages, resulting in widespread wetting of the floodplain and most wetlands Some reliance on water for the environment to achieve target water levels Local rainfall may be high and will provide run-off to most wetlands
Potential environmental watering – tier 1 (high priorities)	<ul style="list-style-type: none"> Brickworks Billabong (fill in spring/summer, then as required) Koorlong Lake (top ups in spring, then as required) Lake Hawthorn (top ups in spring, then as required) Musk Duck (fill in spring-summer, top up summer through autumn and fish attractant flow in June) 	<ul style="list-style-type: none"> Bottle Bend Wetlands (fill in spring) Brickworks Billabong (fill in spring/summer, then as required) Bridge Creek (includes Bridge Creek wetland) (fill in spring) Bullock Swamp North (partial fill in spring) Koorlong Lake (top ups in spring, then as required) Lake Carpul (fill in winter/spring 2024) Lake Hawthorn (top ups in spring, then as required) Lake Powell (fill in winter/spring 2024) Musk Duck (fill in spring-summer, top up summer through autumn and fish attractant flow in June) Neds Corner Floodplain (fill in autumn) Neds Corner Lagoon (fill in autumn) Old Tip Wetland (fill in autumn) Outlet Creek (Karadoc Swamp) 	<ul style="list-style-type: none"> Bidgee Lagoons (top up in spring) Bottle Bend Wetlands (fill in spring) Brickworks Billabong (fill in spring/summer, then as required) Bridge Creek (includes Bridge Creek wetland) (fill in spring) Brown Swamp (Pound Bend) (fill in autumn) Bullock Swamp North (partial fill in spring) Burra Creek North (fill in autumn) Burra Creek South (fill in autumn) Burra Creek South Proper (fill in autumn) Koorlong Lake (top ups in spring, then as required) Lake Carpul (fill in winter/spring 2024) Lake Hawthorn (top ups in spring, then as required) Lake Powell (fill in winter/spring 2024) Musk Duck (fill in spring-summer, top up summer through autumn and fish attractant flow in June) 	<ul style="list-style-type: none"> Bidgee Lagoons (top up in spring) Bottle Bend Wetlands (fill in spring) Brickworks Billabong (fill in spring/summer, then as required) Bridge Creek (includes Bridge Creek wetland) (fill in spring) Brown Swamp (Pound Bend) (fill in autumn) Bullock Swamp North (partial fill in spring) Burra Creek North (fill in autumn) Burra Creek South (fill in autumn) Burra Creek South Proper (fill in autumn) Koorlong Lake (top ups in spring, then as required) Lake Carpul (fill in winter/spring 2024) Lake Hawthorn (top ups in spring, then as required) Lake Powell (fill in winter/spring 2024) Musk Duck (fill in spring-summer, top up summer through autumn and fish attractant flow in June)

		(fill in spring)	<p>autumn and fish attractant flow in June)</p> <ul style="list-style-type: none"> Neds Corner Floodplain (fill in autumn) Neds Corner Lagoon (fill in autumn) Nyah Floodplain (fill in autumn) Old Tip Wetland (fill in autumn) Outlet Creek (Karadoc Swamp) (fill in spring) Vinifera Floodplain (fill in autumn) 	<p>autumn and fish attractant flow in June)</p> <ul style="list-style-type: none"> Neds Corner Floodplain (fill in autumn) Neds Corner Lagoon (fill in autumn) Nyah Floodplain (fill in autumn) Old Tip Wetland (fill in autumn) Outlet Creek (Karadoc Swamp) (fill in spring) Vinifera Floodplain (fill in autumn)
Potential environmental watering – tier 2 (additional priorities)	<ul style="list-style-type: none"> N/A 			
Possible volume of water for the environment required to achieve objectives	<ul style="list-style-type: none"> 2,050 2,200 ML (tier 1) N/A (tier 2) 	<ul style="list-style-type: none"> 8,5808,730 ML (tier 1) N/A (tier 2) 	<ul style="list-style-type: none"> 14,275 14,425 ML (tier 1) N/A (tier 2) 	<ul style="list-style-type: none"> 8,230 8,380 ML (tier 1) N/A (tier 2)
Priority carryover requirements for 2025-26	<ul style="list-style-type: none"> 1,900 ML 			