

5.6 Campaspe system

Variation to the Seasonal Watering Plan 2017-18

This variation was made to pages 168-169 of the seasonal watering plan. Please note the amended text in red below.

Table 5.6.2 Potential environmental watering actions and objectives for the Campaspe River

Potential environmental watering	Environmental objectives
Summer/autumn low flows (10-150 ML/day in December-May)	<ul style="list-style-type: none"> • Maintain the aquatic vegetation • Maintain fish habitat and reinstate slack waters (areas with minimal water movement) • Limit the effect of cold water pollution from Lake Eppalock on fish • Maintain access to riffle habitat and water quality for waterbugs • Maintain permanent connectivity for water quality • Maintain permanent connectivity for platypus movement • Provide increased habitat and longitudinal connectivity for native fish
Summer fresh (50-400 ML/day up to 1 month duration in Jan - April)	<ul style="list-style-type: none"> • Stimulate the migration of native fish from the River Murray into the Campaspe River
Winter/spring freshes (up to 2 events at 1,000-1,800 ML/day for up to 7 days each in June-November)	<ul style="list-style-type: none"> • Reduce encroachment by exotic and terrestrial vegetation • Enhance river red gum recruitment • Stimulate fish movement, allow movement to downstream reaches and provide spawning triggers • Flush and mix river pools for water quality • Flush organics from the bank and benches to reduce the risk of blackwater events in summer • Mix and flush river pools for waterbugs • Inundate additional snags and flush sediment off biofilms (groups of microorganisms) for waterbugs • Support platypus habitat and breeding including triggers for burrow selection
Winter/spring low flows (50-200 ML/day [or natural ¹], in June-November)	<ul style="list-style-type: none"> • Provide longitudinal connectivity for fish • Maintain access to riffle habitat and water quality for waterbugs • Maintain the permanent longitudinal connectivity of the river for improved water quality • Facilitate platypus habitat and breeding opportunities
Summer/autumn freshes (up to 3 freshes of 50-200 ML/day for up to 3 days each in December-May)	<ul style="list-style-type: none"> • Maintain riparian vegetation • Increase the recruitment of in-channel vegetation • Increase the extent of/maintain in-stream aquatic vegetation • Provide longitudinal connectivity for fish in periods of low flows • Maintain waterbug habitat and wash organic matter into the river to drive aquatic food webs • Respond to blackwater events as required

¹ 'Or natural' means that flow rates may be above or below the specified target rates depending on inflows and climatic conditions.

Table 5.6.3 Potential environmental watering for the Campaspe River under a range of planning scenarios

Planning scenario	Drought	Dry	Average - wet
Expected river conditions	<ul style="list-style-type: none"> Few or no unregulated flows High consumptive water deliveries No passing flows in winter No spills from storage 	<ul style="list-style-type: none"> Some unregulated flows Some consumptive water deliveries Increased passing flows Some unregulated flows from storage spill 	<ul style="list-style-type: none"> Frequent unregulated flows Moderate summer consumptive water deliveries in reach 2 and low deliveries in reaches 3 and 4 in summer Increased passing flows Significant spills from storage
Expected availability of environmental water	<ul style="list-style-type: none"> 20,600 ML VEWH 6,600 ML CEWH 100 ML Living Murray 5,000 ML carryover 32,300 ML total 	<ul style="list-style-type: none"> 20,600 ML VEWH 6,600 ML CEWH 100 ML Living Murray 5,000 ML carryover 32,300 ML total 	<ul style="list-style-type: none"> 20,600 ML VEWH 6,600 ML CEWH 100 ML Living Murray 5,000 ML carryover 32,300 ML total
Potential environmental watering - tier 1 (high priorities)	<ul style="list-style-type: none"> Summer/autumn low flow Winter/spring low flow Winter/spring fresh (1 event) Summer/autumn freshes (3 events) Summer fresh Additional freshes may be required to avoid critical loss of species/habitat if a low-dissolved-oxygen event occurs 	<ul style="list-style-type: none"> Summer/autumn low flow Winter/spring low flow Winter/spring freshes (2 events) Summer/autumn freshes (3 events) Summer fresh Additional freshes may be required to avoid critical loss of species/habitat if a low-dissolved-oxygen event occurs 	<ul style="list-style-type: none"> Summer/autumn low flow Winter/spring low flow Winter/spring freshes (2 events) Summer/autumn freshes (3 events) Summer fresh Additional freshes may be required to avoid critical loss of species/habitat if a low-dissolved-oxygen event occurs
Potential environmental watering - tier 2 (lower priorities) ¹	<ul style="list-style-type: none"> Increased magnitude of winter/spring low flow Winter/spring fresh (1 additional event) Increased magnitude of summer/autumn freshes 	<ul style="list-style-type: none"> Increased magnitude of winter/spring low flow Increased magnitude of winter/spring and summer/autumn freshes 	<ul style="list-style-type: none"> Increased magnitude of winter/spring low flow
Possible volume of environmental water required to achieve objectives ²	<ul style="list-style-type: none"> 26,900 ML (tier 1) 16,200 ML (tier 2) 	<ul style="list-style-type: none"> 30,600 ML (tier 1) 18,800 ML (tier 2) 	<ul style="list-style-type: none"> 32,400 ML (tier 1) 15,300 ML (tier 2)

¹ Tier 2 actions are lower-priority actions to be considered if water is available.

² Environmental water requirements for tier 2 actions are additional to tier 1 requirements.