

5.3 Scale and timing of effect

Management options can operate on a variety of different scales (local to regional) and over a variety of different time frames. Table 17 summarises the timing and scale of effect and whether the management options address the cause or symptoms of salinity.

■ Table 17: Salinity Control Options – scale of timing and effect

	Addresses		Timing of effect			Scale of effect		
	Symptoms	Causes	Short term (< 5years)	Medium Term (5 to 10 years)	Long term (> 10 years)	Local (< 5 kilometres)	Intermediate (5 to 20kms)	Regional (>20kms)
Salinity Control Options								
Recharge control – Irrigation management								
Conversion from flood to spray irrig		●		●		●	●	
More efficient flood irrigation		●		●		●	●	
Efficient irrigation development on 'Greenfield sites'		●		●		●	●	
Recharge control – Agronomic options								
Perennial pasture establishment and management	●	●		●	●	●	●	
Alternative irrigated crops	●	●		●	●	●	●	
Tree planting on recharge areas - commercial forestry	●	●		●	●	●	●	●
Tree planting on recharge areas - farm forestry	●	●		●	●	●	●	●
Tree planting - recharge control only + firewood	●	●		●	●	●	●	●
Maintaining and managing existing native vegetation	●	●		●	●	●	●	●
Alley farming (alternating rows of trees and crops/pastures)	●	●		●	●	●	●	●
Engineering options - sub-surface drainage								
Public Groundwater Pumps	●		●			●	●	
Private Groundwater Pumps in high water table areas	●		●			●	●	
Free flowing bores discharging to rivers/drains	●		●			●	●	
Tile and mole drains	●		●			●	●	
Engineering options - surface drainage								
Improved surface drainage	●		●			●	●	
Improved environmental flows	●		●	●		●	●	●
Structures to prevent lake inflow to rivers and/or wetlands	●		●	●		●	●	
Sea Walls	●		●			●	●	
Structures to prevent ocean water entering Lake Wellington	●		●			●	●	
Living with salt								
Salt tolerant crops and pastures	●			●		●	●	
Tree planting - break of slope interception	●			●	●	●	●	
Aquaculture				●		●	●	
Salt harvesting				●		●	●	●
Government buy-back of saline land for rehabilitation	●			●		●	●	
Evaporation basins				●		●	●	
Leaching fractions								
Ensuring appropriate irrigation leaching fractions are achieved	●	●	●	●		●	●	

Based on the characteristics of the management options described above, the applicability of the management options to each Salinity Management Area was determined (Table 18).

■ **Table 18: Current and potential future implementation of salinity management options**

	Lake Wellington - Irrigated					Lake Wellington - dryland						South Gippsland			
	CLYDEBANK	MAFFRA	NAMBROK	HEYFIELD	BOISDALE	WELLINGTON	ROSEDALE	BENGWORDEN	REEVE	STRATFORD	TRAFALGAR	WALHALLA	WILSONS PROM. NP	PORT ALBERT	FOSTER
Mapped land salinity area (Ha)	6,070	936	3,241	504	566	3	3,563	2,511	1,582	403	142	0	0	3,518	1,297
Mapped wetland salinity area (Ha)	3,947	0	403	0	1	18,820	2,366	19	182	675	0	0	0	0	149
Recharge control – Irrigation management															
Conversion from flood to spray irrig	●	●	●	●	●										
More efficient flood irrigation	●	●	●	●	●										
Efficient irrigation development on 'Greenfield sites'	●	●	●	●	●	○	○	●	○	●	○			○	○
Recharge control – Agronomic options															
Perennial pasture establishment and management							●	●	●	●				●	●
Alternative irrigated crops	○	○	○	○	●			○						○	○
Tree planting on recharge areas - commercial forestry								○	○					○	○
Tree planting on recharge areas - farm forestry							○	○	○		○			○	○
Tree planting - recharge control only + firewood							○	○	○		○			○	○
Tree planting - break of slope interception	○	○	○	○	○		○	○	○		○			○	○
Maintaining and managing existing native vegetation	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alley farming (alternating rows of trees and crops/pastures)	○	○	○	○	○			○	○	○	○			○	○
Engineering options - sub-surface drainage															
Public Groundwater Pumps	●	▲	●	●	○		○	○						○	○
Private Groundwater Pumps in high water table areas	●	●	●	●	●		○	○						○	○
Free flowing bores discharging to rivers/drains	●		●												
Tile and mole drains	●														
Engineering options - surface drainage															
Improved surface drainage	●	●	●	●	●			●	●	●				●	●
Improved environmental flows	▲	▲	▲	▲	▲										
Structures to prevent lake inflow to rivers and/or wetlands	●					●	●	○							
Sea Walls														●	●
Structures to prevent ocean water entering Lake Wellington	○													○	
Living with salt															
Salt tolerant crops and pastures	●	●	●	●	●	○	○	●	●	●	○			●	●
Aquaculture	○		○												
Salt harvesting															
Government buy-back of saline land for rehabilitation	○		○			○	○		○						
Evaporation basins	○														
Leaching fractions															
Ensuring appropriate irrigation leaching fractions are achieved	●	●	●	●	●									○	