

# **Victorian Desalination Project**



## **Environmental Management Plan Attachment 4 – Environmental Monitoring Schedule**

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**ATTACHMENT 4 – ENVIRONMENTAL MONITORING SCHEDULE**

This Environmental Monitoring Schedule includes only environment-specific monitoring programs. The monitoring associated with O&M activities of the Desalinated Water Supply System is integrated into the relevant O&M Manuals, including for the mechanical, electrical, chemical and control systems.

Type	Purpose	Scope	Monitoring Objectives and Targets	Monitoring Methodology	Responsibility	Frequency
<b>Marine – Operational Marine Monitoring Program (OMMP)</b>						
Plant and diffuser performance, water quality parameters, marine ecology, and coastal processes	To minimise adverse environmental effects by monitoring spatial extent and impact on offshore marine and coastal environment	Monitoring of reef community, marine biodiversity and Williamsons Beach coastal processes in accordance with OMMP	<p>To monitor compliance with the Works Approval Conditions</p> <p>To monitor compliance with the Section 30A Commissioning Approval</p> <p>To monitor compliance with Discharge Licence conditions</p> <p>To monitor compliance with Pollution of Waters by Oils and Noxious Substances Act 1986</p> <p>To monitor compliance with Waste Management Policy (Ships' Ballast Water), No. S100.</p> <p>Comply with Project Deed Performance Requirements</p>	In accordance with the OMMP	Environment Manager	In accordance with the OMMP

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Type	Purpose	Scope	Monitoring Objectives and Targets	Monitoring Methodology	Responsibility	Frequency
<b>Acid Sulfate Soils</b>						
Groundwater monitoring	To prevent pollution by ensuring early detection of any signs of groundwater acidification	Groundwater monitoring as per EPA Discharge Licence	To monitor compliance with State Environment Protection Policy (Groundwaters of Victoria) No. S160.	As per EPA Discharge Licence and SEPP (WoV) with reference to: <ul style="list-style-type: none"> <li>Industrial Waste Management Policy (Waste Acid Sulfate Soils) No. S125</li> <li>EPA (2009) Industrial Waste Resource Guidelines, Soil Hazard Categorisation and Management</li> <li>EPA (2009) Industrial Waste Resource Guidelines, Soil Sampling</li> <li>EPA (2009) Industrial Waste Resource Guidelines, Sampling and analysis of waters, wastewaters, soils and wastes</li> <li>EPA (2009) Industrial Waste Resource Guidelines, Waste codes</li> <li>EPA (2009) Industrial Waste Resource Guidelines, Waste categorisation</li> </ul>	Environment Manager	In accordance with EPA Discharge Licence and SEPP (WoV)
Surface water monitoring	To prevent pollution by ensuring early detection of any signs of surface water acidification	Surface water monitoring as per EPA Discharge Licence.	To monitor compliance with State Environment Protection Policy (Waters of Victoria) No. S210.  Comply with Project Deed Performance Requirements			
<b>Air quality</b>						
Air quality monitoring	To ensure activities are managed in an environmentally sensitive manner by responding to complaints	If required, in response to an air quality complaint that has been received within a distance from O&M activities that levels of disturbance are possible	To monitor compliance with State Environment Protection Policy (Air Quality Management), No. S240.  To monitor compliance with State Environment Protection Policy (Ambient Air Quality) No. S19.	Australian Standard 3580.1.1 – Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment	Environment Manager	If required, in response to a complaint

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Type	Purpose	Scope	Monitoring Objectives and Targets	Monitoring Methodology	Responsibility	Frequency
			Comply with Project Deed Performance Requirements			

### Ecological Reserve (that forms part of the Victorian Desalination Project)

Ecological Reserve monitoring and inspection	To minimise adverse environmental effects by monitoring reserve amenity and environmental values	Monitor litter, weeds and pests and known sensitive locations, including Aboriginal cultural heritage, heritage and flora and fauna.	To monitor compliance with the requirement for no adverse impact on terrestrial flora and fauna.  Comply with Project Deed Performance Requirements	In accordance with site environmental inspection checklist	Environment Manager	Monthly
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### Environmental performance inspection

Desalination Plant and Transfer Pipeline monitoring and inspection	To minimise adverse environmental effects by monitoring amenity and environmental values	Monitor litter, weeds and pests, spill kits and known sensitive locations, including Aboriginal cultural heritage, heritage and flora and fauna.	To monitor compliance with the requirement for no adverse impact on terrestrial flora and fauna.  Comply with Project Deed Performance Requirements	In accordance with site environmental inspection checklist	Environment Manager	Monthly
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Type	Purpose	Scope	Monitoring Objectives and Targets	Monitoring Methodology	Responsibility	Frequency
<b>Flora and fauna</b>						
<i>Phytophthora cinnamomi</i> dieback monitoring	To minimise adverse environmental effects by monitoring dispersal of <i>Phytophthora cinnamomi</i> dieback in remnant native vegetation in close proximity to the utilities corridor	Two years post completion of rehabilitation works in accordance with the property-specific rehabilitation plan.	To monitor compliance with the property-specific rehabilitation plan  Comply with Project Deed Performance Requirements	Berg. G. (2006). Potato Cyst Nematode, Agriculture Notes (AG0572). Department of Primary Industry (DPI)  DSE (2008). Victoria's Public Land; Phytophthora cinnamomi Strategic Management Plan	Environment Manager	In accordance with the property-specific rehabilitation plan
Marine pests	To minimise adverse environmental effects by monitoring marine pests	Monitor vessels and marine equipment	To monitor compliance with Waste Management Policy (Ships' Ballast Water), No. S100.  To monitor compliance with Pollution of Waters by Oils and Noxious Substances Act 1986  Comply with Project Deed Performance Requirements	DAFF (2005) Draft Australian Emergency Marine Pest Plan. Control Centres Management Manual  DPI (2009) Biosecurity Control Measures for Abalone Viral Ganglioneuritis: A Code of Practice	Environment Manager	Prior to and during marine activities
Rehabilitation monitoring	To minimise adverse environmental effects by monitoring rehabilitation, including reinstatement and weed and pest control	Post construction in accordance with the property-specific rehabilitation plan	To monitor compliance with property-specific rehabilitation plan  Comply with Project Deed Performance Requirements	DSE (2006) Native Vegetation – Revegetation Planting Standards	Environment Manager	In accordance with the property-specific rehabilitation plan

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Type	Purpose	Scope	Monitoring Objectives and Targets	Monitoring Methodology	Responsibility	Frequency
Significant species monitoring	To minimise adverse environmental effects by post construction monitoring of areas of known significant species	Post construction in accordance with the EPBC Act significant species requirements	To monitor compliance with the requirement for no significant impact on EPBC Act significant species.  Comply with Project Deed Performance Requirements	In accordance with the EPBC Act significant species requirements	Environment Manager	In accordance with the EPBC Act significant species requirements
Hooded Plover	To minimise adverse environmental effects by continuing to monitor breeding success of resident Hooded Plovers along Williamsons Beach	Until the plant is in routine operation in accordance with the Hooded Plover monitoring program	To monitor compliance with the requirement for no impact on Hooded Plovers along Williamsons Beach.	In accordance with the Hooded Plover monitoring program	Environment Manager	Monthly in accordance with the Hooded Plover monitoring program

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### Noise and vibration

Noise & Vibration Monitoring	To ensure activities are managed in an environmentally sensitive manner by responding to complaints	If required, in response to a noise complaint that has been received within a distance from O&M activities that audible levels of noise disturbance are possible	To monitor compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 No. S31  Comply with Project Deed Performance Requirements	EPA – A guide to the measurement and analysis of noise (EPA 280, 1991)  Australian Standard AS 1055.1 – 1997 Acoustics – Description and Measurement of Environmental Noise	Environment Manager	If required, in response to a complaint
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### O&M activities – Construction works necessary for O&M activities

Any monitoring identified in environmental approvals, including relevant Project Deed Performance Requirements	To minimise adverse environmental effects by monitoring construction works necessary for O&M activities, such as: <ul style="list-style-type: none"> <li>Aboriginal cultural heritage</li> <li>flora and fauna</li> <li>groundwater</li> <li>heritage</li> <li>Potential Acid Sulfate Soils and contamination</li> <li>surface water quality</li> </ul>	Any construction works necessary for O&M activities	To monitor compliance with environmental approvals and in accordance with the relevant Project Deed Performance Requirements, including SEPP requirements where applicable.	As relevant for the identified environmental approvals and in accordance with the relevant Project Deed Performance Requirements	Environment Manager	As relevant for the identified environmental approvals and in accordance with the relevant Project Deed Performance Requirements
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### Resource efficiency

Energy, water, chemical and waste monitoring	To conserve resources and reduce waste by monitoring resource use efficiency	Monitor compliance, waste generation and resource consumption against resource efficiency indicators in accordance with the O&M EMP	To monitor compliance with annual measurable targets for energy, water and chemical use, and waste reduction in accordance with the O&M EMP	National Greenhouse and Energy Reporting (Measurement) Systems and Technical Guidelines 2008 v1.0 (Department of Water Climate Change, 2008).  EPA Publication 448.3 – Classification of Wastes and the Guidelines	Environment Manager	Monthly
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### Surface water quality

Surface water quality monitoring	To minimise adverse environmental effects by monitoring volume, velocity and quality of surface water, including any water discharged from pipeline scour valves	Surface water monitoring	To monitor compliance with State Environment Protection Policy (Waters of Victoria) No. S210.  Comply with Project Deed Performance Requirements	In accordance with EPA Discharge Licence and SEPP (WoV) with reference to <ul style="list-style-type: none"> <li>EPA (2009) Industrial Waste Resource Guidelines, Sampling and analysis of waters, wastewaters, soils and wastes</li> </ul>	Environment Manager	In accordance with EPA Discharge Licence and SEPP (WoV)
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