

EIP ACTION PLAN

Reference: AS/NZS ISO14001:1996 Clause 4.3.4 "Environmental management programme(s)"

AS/NZS ISO14001:1996 Clause 4.4.1 "Structure and responsibility"

LEGEND

RED	Indicates that the obligation is overdue.
YELLOW	Indicates that the obligation is in progress.
GREEN	Indicates that the obligation is completed.
WHITE	Indicates that the obligation is not yet in progress.
BLUE	Indicates an ongoing obligation.

REF.	OBJECTIVE	ACTION	PERSON RESPONSIBLE	DUE DATE	UPDATE
1. Emissions to Atmosphere					
1.1	Melbourne Water will minimise odours generated at WTP and will not discharge odours offensive to the sense of human beings beyond the boundary of the premises by January 2005.	Melbourne Water will progressively reduce odours by phasing out Land Filtration practices and Grass Filtration practices.	Section Leader, WTP Planning	1 January 2005	Completed.
1.2		Melbourne Water will eliminate odours from the West Tanks sedimentation tanks and sludge digesters by decommissioning these processes.	Section Leader, WTP Planning	1 January 2005	Completed
1.3		Melbourne Water will undertake Community Odour Survey.	Section Leader, WTP Process Support	31 December 2003	Completed February 2004.
1.4		Melbourne Water will conduct on-site odour measurements, dispersion modelling and investigate site specific treatment options for odour source sites that significantly impact the Western Treatment Plant odour profile.	Section Leader, WTP Planning	30 June 2003	Completed June 2004 Updated for Proposed developments December 04.
1.5		Melbourne Water will determine the future of old lagoons and, if required for treatment, plan for covered sections of the anaerobic pre-treatment sections of these lagoons.	Section Leader, WTP Planning	Complete	Anaerobic treatment provided in the 25 West lagoon as part of the 25 West lagoon upgrade project
1.6	Melbourne Water will meet the requirements of the Protocol for Environmental Management "Greenhouse Gas Emissions and Energy	Melbourne Water will negotiate with EPA Victoria to ensure that the work that has already been undertaken to prepare an inventory and improvement actions meets the EPA Victoria's needs for a level two audit.	Project Mgr, Env Regulation	31 July 2003	MWC met with the EPA and discussed the requirements for a level two audit in November. MWC submitted the required information to the EPA in December 2003.
1.7		Melbourne Water will estimate the direct greenhouse emission from the Western Treatment Plant in CO ₂ -equivalent terms using appropriate estimation methodologies.	Project Mgr, Env Regulation	Complete	

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1.8	Efficiency in Industry” contained in the State Environment Protection Policy (Air Quality Management).	Melbourne Water will identify and evaluate opportunities to reduce greenhouse gas emissions from both energy and non-energy related sources and prepare a Greenhouse Gas Action Plan for implementing measures identified by the Energy Audit and which are consistent with the definition of eco-efficient and best practices.	Project Mgr, Env Regulation	Complete	Covering of all anaerobic processes has dramatically reduced greenhouse emissions. Expansion of power generation using additional biogas will reduce electricity imports further reducing net greenhouse impact
1.9		Melbourne Water will document the information generated by undertaking Actions 1.6, 1.7, & 1.8 in a report for submission to EPA.	Project Mgr, Env Regulation	31 December 2003	As per action 1.6 all correspondence will continue to be documented. Documentation for items 1.7 and 1.8 are complete.
1.10		Melbourne Water will implement the Greenhouse Gas Action Plan.	Project Mgr, Env Regulation	31 December 2006	
1.11		Melbourne Water will review opportunities to take further steps to reduce energy use and non-energy related greenhouse gas emissions once the Greenhouse Gas Action Plan has been fully implemented.	Project Mgr, Env Regulation	Ongoing from 31 December 2006	Items under consideration include <ul style="list-style-type: none"> o using natural gas as a supplemental fuel to maximise electricity generation from biogas o using waste heat and/or biosolids as an energy source for desalination.
1.12	Melbourne Water will ensure that noise from the Western Treatment Plant facilities and operations comply with SEPP (Control of Noise from Commerce, Industry and Trade) and Occupational Health and Safety requirements.	Melbourne Water will undertake a noise survey to determine whether noise levels at the Western Treatment Plant are within SEPP limits, and establish a relevant rectification program if required.	Section Leader, WTP Process Support	Completed	Survey undertaken in December 2003.
2. Discharges to Water					
2.1	Melbourne Water will upgrade and operate the Western Treatment Plant to protect the beneficial uses of Port Phillip Bay.	Melbourne Water will meet future performance limits for organic parameters, heavy metals and other toxicants (as outlined in Table 1C of the EPA Licence).	Section Leader, WTP Planning	1 January 2005	Works are in place to meet requirements
2.2		Melbourne Water will reduce risks to nutrient cycling and the risk of nuisance algal and seaweed blooms in Port Phillip Bay by reducing the total nitrogen discharge to Port Phillip Bay to 3,100 tonnes per annum (or as far as possible).	Section Leader, WTP Planning	1 January 2005	Works are in place with sufficient capacity to provide nitrogen removal
2.3		Melbourne Water will ensure that SEPP water quality objectives are met outside the boundaries of mixing zones defined in the EPA Licence for all parameters.	Section Leader, WTP Planning	1 January 2005	Environment Improvement Project works are completed and are expected to meet mixing zone requirements. Some parameters currently tested outside mixing zone. – remainder to be added to monitoring contract.
2.4		Melbourne Water will construct and commission the 25 West lagoon activated sludge plant.	Section Leader, WTP Planning	December 2004	Activated sludge process constructed and commissioned
2.5		Melbourne Water will continue to undertake work to reduce the mixing zone but remain in compliance with the EPBC Act.	Section Leader, WTP Planning [Now: Manager, Treatment Process Plan.]	Ongoing	Recently completed lagoon upgrade works will provide significant improvement in water quality. Ongoing development of water recycling projects will continue to reduce volume discharged.

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2.6		Melbourne Water will ensure that untreated sewage is contained within the Western Treatment Plant by having appropriate contingency plans in place.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	WTP has a general contingency plan and 9 specific plans for high risk sites for containment of sewage spills within WTP. These were updated July 2003.
2.7		Melbourne Water will ensure the No Spills Policy is implemented.	Project Mgr, Env Regulation	Ongoing	Now covered by the Environment Policy, recently reviewed July 2003. Next review July 2005.
2.8		Melbourne Water will undertake an environmental monitoring program to assess the impacts of treated effluent discharges on Port Phillip Bay.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	The Integrated Monitoring Program project will review effectiveness of monitoring programs in assessing impact on beneficial uses. Report is being finalised.
3. Discharges to Groundwater					
3.1	Melbourne will reduce discharges of toxicants from sewage treatment operations to groundwater.	Melbourne Water will improve the quality of water reaching groundwater systems beneath the plant by implementing the Environment Improvement Project works and replacing land and grass filtration practices with irrigation using recycled water.	Section Leader, WTP Planning	1 January 2005	Irrigation fully converted to recycled water in December 2004.
3.2		Melbourne Water will construct all new sludge pumping, drying and stockpile areas with suitably compacted bases and appropriate leachate collection systems to minimise groundwater pollution and the transfer of pollutants offsite.	Section Leader, WTP Planning [Now: Manager, Treatment Process Plan.]	As required	Drying Pan Refurbishment project has been designed and is preparing for construction.
4. Discharges to Soil					
4.1	Manage the contaminant load in grass and land filtration areas to ensure that future beneficial uses are protected.	Melbourne Water will phase out the discharge of raw sewage to land at the Western Treatment Plant.	Section Leader, WTP Planning	1 January 2005	Irrigation fully converted to recycled water in December 2004
4.2		Melbourne Water will assess the soil results provided by the Water ECOscience and determine if further investigation in crop contamination is required.	Manager Reuse Projects [Now: Manager, Water Recycling]	As required	Assessments are undertaken on a specific proposal basis
4.3		Melbourne Water will work with retail water companies to ensure the total dissolved solids of untreated sewage received into the treatment plant does not exceed a median concentration of 1,250 mg/L (Licence Condition 1.5).	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	Plant capacity statements completed for 2005 including increased focus on reducing salinity in recycled water. City West Water has established a target to reduce their salinity contribution by 20% - a 10% reduction in salinity at Western Treatment Plant.
5. Management of Sheep & Cattle Spray / Dip Sites and Former Tip Sites					
5.1	Melbourne Water will manage existing contaminated areas to ensure that future beneficial	Melbourne Water will ensure that the three sites risk ranked to be a "high" priority are individually assessed to determine appropriate management actions and the timing of such actions.	Section Leader, WTP Process Support	Completed	Assessments completed for: 1. 29 Mile Rd Tip Site 2. Losewitz Paddock Sludge & groundwater monitoring undertaken 3. Current Tip Site (East Tanks) Relocated to lined West Tanks with drainage & runoff management

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5.2	uses are protected.	Melbourne Water will ensure that the sites ranked "medium" and "low" are individually assessed to determine appropriate management actions and the timing of such actions.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	31 December 2005	Soil and groundwater sampling and analysis have been undertaken. A report is being prepared
6. Effluent Reuse (Waste Minimisation)					
6.1	Melbourne Water will maximise water recycling at	Melbourne Water will develop an Environment Improvement Plan for on-site reuse.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	1 July 2004	EIP has been reviewed by EPA and comments are currently being addressed by Melbourne Water.
6.2	Western Treatment Plant.	Melbourne Water will recycle 10% of treated effluent discharged from Melbourne Water's treatment plant on-site at the Western Treatment Plant following the completion of the Environment Improvement Project.	Section Leader, WTP Planning [Now: Manager, Treatment Process Plan.]	January 2010	2001/02 - 2.0% treated effluent recycled. 2002/03 - 6.4% treated effluent recycled. 2003/04 - 6.5% treated effluent recycled 2004/05 - 12.5 % treated effluent recycled
6.3		Melbourne Water will utilise the Water Recycling Group to investigate applications for recycled water both on-site and offsite.	Manager Reuse Project s [Now: Manager, Water Recycling]	Ongoing	Werribee Irrigation District project implemented Werribee Technology Precinct under negotiation with City West Water Broader proposals for supply to Bacchus Marsh, Balliang & Moorabool being considered in strategic review across the region.
6.4		Melbourne Water will aim to recycle 10% of treated effluent discharged from both treatment plants in offsite recycling schemes.	Manager Reuse Projects [Now: Manager, Water Recycling]	January 2010	2004/2005 WTP - <1% treated effluent reused. (Tourist Precinct & Werribee Irrigation District) ETP - 1.1% treated effluent reused. Werribee Irrigation District will increase recycling to approximately 4%
7. Biosolids Management (Waste Minimisation)					
7.1	Melbourne Water will maximise beneficial use of biosolids where it is possible to meet statutory regulations, minimise risks	Melbourne Water will recycle 100% of biosolids produced from Melbourne Water sewage treatment plants.	Project Manager, Treatment Technology [Research & Technology]	January 2010	MW has completed a biosolids management strategy and continues to explore opportunities to beneficially reuse biosolids. Options under consideration include: <ul style="list-style-type: none"> o Use for power generation o Use for heat for desalination o Use for mine site rehabilitation
7.2	to the environment and/or public health and optimise	Melbourne Water will review the environmental risks posed by the existing biosolids management practices at the Western Treatment Plant and report findings to the EPA.	Section Leader, WTP Process Support	Complete	Report completed February 2003 and provided to EPA March 2003

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7.3	business opportunities.	Melbourne Water will develop a management plan for sustainable sludge management at the Western Treatment Plant for submission to the EPA.	Project Manager, Treatment Technology	Complete	Sludge Management Plan submitted to EPA in December 2003.
7.4		Melbourne Water will contribute to the development of government policy regarding biosolids management via the NRE working group and will assist with the development of biosolids regulation and management practice via EPA, NRE and DHS.	Project Manager, Treatment Technology [Research & Technology]	Ongoing	MW is an active member of the DSE Biosolids working group and has provided comment of the Vic EPA Biosolids Guidelines. Also represented on a Steering Group for CSIRO Ultrasonics R&D project aimed at reducing quantities of sludge produced and a more stabilised end product.
7.5		Melbourne Water will investigate and develop beneficial use options for biosolids and encourage and support third parties wishing to treat and remove contaminants from biosolids stockpiled at Western Treatment Plant where possible.	Project Manager, Treatment Technology [Research & Technology]	Ongoing	Melbourne Water continues to explore opportunities to beneficially reuse biosolids. Options under consideration include: <ul style="list-style-type: none"> o Use for power generation o Use for heat for desalination o Use for mine site rehabilitation.
8. Trade Waste Management (Waste Minimisation)					
8.1	Melbourne Water will manage the quality of sewage accepted from retail water companies to	Melbourne Water will work towards gaining a better understanding of sources of pollutants (especially TDS), and minimise sewage inputs where this represents a triple bottom line benefit.	Team Leader, Sewerage Planning [Now: Manager, Treatment Process Plan.]	Ongoing	A study of sources of pollutants and minimisation options was undertaken for the Eastern Treatment Plant catchment as part of the works approval process. This found limited opportunity for broad scale solutions. City West Water, in consultation with Melbourne Water are undertaking targeted investigations to better understand industrial contribution to TDS and to identified tailored solutions to minimise outputs.
8.2	minimise business risk at a commercial price.	Melbourne Water will approve variations to trade waste agreements only where the Western Treatment Plants' capacity to treat or remove the substances is not exceeded.	WTP Section Leader, Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	Plant capacity statements developed March each year. Variations assessed in accordance with the Procedures for assessing Retail Water Company Variations.
8.3		Melbourne Water will only approve applications for a trade waste variation if the company applying for the variation is complying, or has a specific plan to comply, with Schedule 4, Section 2.4(iv) of the BSA.	WTP Section Leader, Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	Plant capacity statements developed March each year. Variations assessed in accordance with the Procedures for assessing Retail Water Company Variations.
9. Management of Conservation Values					
9.1	Melbourne Water will maintain the ecological character of the Western Treatment Plant.	Melbourne Water will manage conservation at Western Treatment Plant by complying with all relevant legislation including the conditions set out by Environment Australia for the approval of the Western Treatment Plant Environment Improvement Project (post Effluent Reuse Stage 2).	Team Leader, Catchments & Waterways [Now: Manager, Waterways]	As scheduled	The required Strategic Plan was completed in December 03. An ongoing monitoring program is underway assessing habitat values against benchmark pre upgrade levels.
10. Agricultural Management					

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10.1	The Werribee Agriculture Group will comply with the WAG Environmental Management Program.	Werribee Agriculture Group will implement the actions listed in the Environmental Management Program for Werribee Agriculture.	Werribee Agriculture Group Manager	As scheduled	
11. Land Management					
11.1	Melbourne Water will evaluate land use proposals	Melbourne Water will use the guiding principles agreed by the Land Use Strategy Reference Group to evaluate proposals for future land use at the Western Treatment Plant.	General Manager Water Resources [Now: GM Strategy & Planning]	Ongoing	Both short listed expressions of interests are not proceeding due to financial considerations
11.2	in accordance with the guiding principles agreed by the Reference Group.	Melbourne Water will increase the public amenity of Western Treatment Plant.	General Manager Water Resources [Now: GM Strategy & Planning]	Ongoing	Discovery Centre is now complete. Process underway to transfer land to Parks Victoria for Werribee River park.
12. Management of Heritage Values					
12.1	Melbourne Water will comply with state/federal legislation relating to the protection of heritage and archaeological values at WTP.	Melbourne Water will protect and maintain heritage and archaeological values at the Western Treatment Plant.	CEPHA Checklist signatories	As required	Community / Environment / Public Health Assessment procedure and Checklist were updated July 2003 to include heritage and archaeological values All CEPHA signatories to undergo training in September 2003. Completed.
13. Management of Communication					
13.1	Melbourne Water will provide regular communication cross links to	Melbourne Water will ensure the minutes of the Community Liaison Committee, the Land Use Strategy Reference Group and the Wildlife Consultative Committee meetings are distributed amongst the committees.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	minutes circulated.
13.2	update and seek input from the Community Liaison Committee, the Land Use Strategy Reference Group and the Wildlife Consultative Committee.	Melbourne Water will ensure a representative of the Land Use Strategy Reference Group regularly attends the Community Liaison Committee meetings to provide progress updates.	Section Leader, WTP Process Support [Now: Team Leader, WTP Treatment Support]	Ongoing	Land Use Strategy Reference Group on hold. Relevant Melbourne Water project managers to attend community liaison committee meetings and provide updates on current projects as requested.