

Water quality

Performance monitoring summary for the Healthy Waterways Strategy 2018

Overview

Water quality performance objectives aim to ensure water quality is adequately managed to protect key waterway values and the bays. In addition to benefiting ecological values appropriate water quality is critical to minimise human health risks associated with recreational activities in and on the water. For the majority of the performance objectives, there are no specific targets for estuaries, but the actions upstream will benefit the estuary.

Performance objectives are set regionally, as regional performance objectives (RPOs), and at the sub-catchment, as sub-catchment performance objectives (SCPOs). Water quality performance objectives have been categorised into the following themes:

- Managing diffuse and point source pollution: urban land uses, rural agricultural activities, industrial sites, sewage treatment plant discharges and septic tanks.
- Addressing the full spectrum of contaminants from nutrients and pesticides to new and emerging pollutants such as micro-plastics and pharmaceuticals.
- Coordinating a response through development of programs, standards, investigations, monitoring, enforcement and infrastructure solutions.

This group aligns closely with the Stormwater group and should be read in conjunction because performance objectives relating to higher stormwater standards also benefit water quality. It has been separated to highlight specific known sources of water quality impact that exist across a range of land uses.

Managing rural land to reduce erosion and nutrient and pollutant run-off has been highlighted at the catchment level and focuses on specific sub-catchments where values are high and there is evidence of water quality threat or where sedimentation and pollutants threatens sea grass values in Western Port.

Improving the management of rural land adjacent to waterways, particularly headwater streams, drains, dams, wetlands, gullies, seeps, soaks springs and seasonally wet areas, is essential to local waterway and catchment health. Included in this theme is the development of programs, standards and tools to ensure adequate capacity and resourcing is in place.

Performance objectives that seek to maintain the quality and load discharging from sewage treatment plants (and reducing pollutants where possible) were developed in sub-catchments with existing sewage treatment plants to ensure environmental values are supported in the waterway and bay targets set in the Environmental Management Plan for Port Phillip Bay (2017-2027) are aligned.

There are a number of sub-catchments which were prioritised for addressing pollution from industrial activity. Performance objectives in this theme are focused on identifying and mitigating sources of industrial pollution, which may be through education programs, enforcement actions or disconnections from the stormwater system. This theme is closely aligned with Stormwater, particularly around identifying and mitigate sources of industrial pollution, which can be delivered to waterways via the stormwater network.

There are a range of pollutants in urban catchments that contaminate waterways. This theme is about better understanding and managing pollution in our waterways and about developing risk based programs to address impacts. A range of stakeholders need to coordinate to enable priorities to be established and actions to be taken. Options to fund on-ground actions that address water quality priorities are being explored.

Performance indicators and data:

Performance Objective theme	Performance Objective description	Performance indicators	Data required to track progress	Timing	Who is involved in reporting
Improve water quality from agricultural land practices	In priority sub-catchments	ha of rural land treated ha vegetation established on headwater streams	Modelled outputs of nutrient and sediment loads Rural land metric outputs ha of rural land treated to meet catchment target DELWP standard output for vegetation established	Annual from 2018	Melbourne Water
Improve water quality from agricultural land practices	Programs, standards, tools and guidelines are in place to manage nutrients, sediments and other pollutants from rural land in priority areas (RPO-25)	Tools and guidelines developed Key agency programs in place	Progress report Evidence of key programs	Annual from 2020	Melbourne Water
Maintain or improve quality of Sewerage Treatment Plant discharges	In priority sub-catchments	Sewerage Treatment Plant compliance with license discharges No net increase in nutrient loads	Compliance reporting Annual nutrient load from sewage treatment plants	Annual from 2020	Water authorities and EPA

Performance Objective theme	Performance Objective description	Performance indicators	Data required to track progress	Timing	Who is involved in reporting
		from sewage treatment plants			
Address urban diffuse sources of WQ impact	Sub-catchment performance objectives around addressing multiple sources of diffuse pollution	<p>% new impervious surfaces treated to best practice</p> <p>Investigate and mitigate impacts from septic systems</p> <p>% impacting septic tanks mitigated</p>	<p>Impervious mapping</p> <p>Impacts investigated, impacts mitigated</p> <p>Report with evidence</p>	<p>Annual from 2020</p> <p>Annual from 2020</p> <p>Annual from 2020</p>	<p>Councils and Melbourne Water</p> <p>Retail Water Authorities</p> <p>Retail Water Authorities</p>
Maintain / protect recreational water quality	In priority locations	SEPP compliance reporting	Microbial water quality data	Annual from 2018	Melbourne Water
Understanding and risk based programs	Managing Pollution – understanding emerging contaminants and risk based programs to migrate urban pollution. (RPO 23 and 24)	<p>Research program into emerging contaminants in place</p> <p>Risk based program developed, Program implemented</p>	<p>Research reports</p> <p>Progress report</p> <p>Relevant water and sediment quality datasets</p>	<p>Annual from 2020</p> <p>Annual from 2020</p>	<p>Melbourne Water</p> <p>Melbourne Water</p>

Catchment wide water quality performance objectives:

Scale	PO
Werribee Catchment	Reduce nutrient and sediment runoff from rural land through improved management of 320 hectares of land including works to protect and increase vegetation along headwater streams
Maribyrnong Catchment	Reduce nutrient and sediment runoff from rural land through improved management of 530 hectares of land including works to protect and increase vegetation along headwater streams.
Yarra Catchment	Reduce nutrient and sediment runoff from rural land through improved management of 1800 hectares of land including works to protect and increase vegetation along headwater streams.
Dandenong Catchment	Reduce nutrient and sediment runoff through improved management of 10 hectares of rural land including works to protect and increase vegetation along headwater streams
Westernport	Reduce nutrient and sediment runoff from rural land through improved management of 16,000 hectares of land including works to protect and increase vegetation along headwater streams – contributes to reducing sediment loads to Western Port.

The number of Performance objectives relative to each theme:

Performance Objective theme	Regional	Rivers	Wetlands	Estuaries
Improve water quality from agricultural land practices	1	20	4	7
Maintain or improve quality of STP discharges		7		
Address urban diffuse sources of WQ impact		11	1	1
Maintain / protect recreational water quality		9		
Understanding and risk based programs	2			

About this document

Delivering the Performance Objectives

Melbourne Water and partners will approach implementation of the many different Performance Objectives within this theme according to each organisations obligations and delivery mechanisms and their associated capacity and capability to plan and deliver the required activities/works.