



# Monitoring Victoria's Water Resources





VICTORIA

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Victorian  
Auditor-General

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The Hon Bruce Atkinson MLC  
President  
Legislative Council  
Parliament House  
Melbourne

The Hon Telmo Languiller MP  
Speaker  
Legislative Assembly  
Parliament House  
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my report on the audit *Monitoring Victoria's Water Resources*.

Yours faithfully



Dr Peter Frost  
*Acting Auditor-General*

25 May 2016



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# Auditor-General's comments

Our way of life, the diversity of our aquatic and marine ecosystems and the success of many of our industries, including fisheries and tourism, rely heavily on high environmental water quality. Long-term monitoring of water quality is critical to understanding the condition and health of Victoria's natural waterways and bays, and to the early detection of and response to emerging problems. It is also critical to assessing the effectiveness of policies and programs to improve water quality, and the state's significant investment in the health of waterways and bays. Programs and approaches to long-term water quality monitoring have evolved significantly since their inception in Victoria in the early 1970s, and it is now more than 30 years since the first steps were taken to establish a systematic and coordinated approach to monitoring the state's water resources.

This audit looked at the Department of Environment, Land, Water & Planning's (DELWP) actions to address the problems its 2015 internal audit of its water quality monitoring network had identified. It also assessed the efficiency and effectiveness of long-term water quality monitoring by Melbourne Water, the Environment Protection Authority Victoria (EPA) and DELWP in the Port Phillip and Western Port region, because this was not examined as part of DELWP's internal audit.

I found that, although individual long-term programs are generally well planned and implemented in the Port Phillip and Western Port region, they operate in isolation rather than as an organised and coordinated network of programs designed to collectively meet statewide policy objectives.

Monitoring and reporting roles and responsibilities and the aims of individual monitoring programs are not always clear. The link between these programs and policy objectives and targets is unclear. This is mainly a result of past poor coordination between the three responsible agencies, and no lead agency being assigned to ensure a formalised cooperative approach to program planning, data use, reporting and evaluation across the region, as in the other nine catchment regions where DELWP has this role.

The key risk associated with this approach is that agencies cannot provide assurance to government or the community that the current set of monitoring programs, and the use and reporting of their data, provides a comprehensive view of the long-term trends in the quality of our waterways and bays. It also reduces assurance that key policy initiatives and waterway works improve long-term water quality effectively and efficiently.

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Encouragingly, the audited agencies have already, individually and collectively, taken a range of actions that will address the problems identified and improve long-term water quality monitoring throughout the state. During this audit, DELWP, EPA and Melbourne Water engaged with my office and each other constructively and positively. This led to early agreement about the main barriers to effective long-term water quality monitoring and the development of a joint agency action plan that, when put into effect, will address the recommendations made in this audit. This has already improved coordination and collaboration among the agencies, which have shown a strong commitment to improving programs in all of the state's catchment regions.

A handwritten signature in black ink, appearing to read 'P. Frost', with a long horizontal stroke extending to the right.

Dr Peter Frost  
*Acting Auditor-General*  
May 2016

# Audit summary

Monitoring water quality over the long term requires consistent and regular gathering of water quality data to provide information about waterways and bays.

The data collected can be used to:

- assess current water quality
- determine trends in water quality
- detect emerging problems with water quality
- evaluate how successful policies and management interventions have been in improving water quality and the health of waterways.

The Department of Environment, Land, Water & Planning (DELWP), Melbourne Water (MW) and the Environment Protection Authority Victoria (EPA) carry out monitoring programs in Victoria's 10 regional catchments and two bays. Freshwater, estuarine and marine waters are monitored using a range of physico-chemical, bacteriological and biological indicators.

DELWP is responsible for carrying out long-term assessments of the state's water resources under the *Water Act 1989*. In 2015, DELWP carried out an internal audit of the effectiveness of the water quality monitoring required to support the delivery of these assessments, and developed an action plan to implement the audit's recommendations. Because of DELWP's current limited role in the Port Phillip and Western Port region, the audit did not look at long-term water quality monitoring in the region as a whole. As the responsible waterway manager, MW carries out most long-term water quality monitoring in the Port Phillip and Western Port region. The EPA also has a range of targeted inland and bay monitoring programs in the region.

Our audit looked at the effectiveness and efficiency of the long-term water quality monitoring of Victoria's waterways and bays by examining:

- the rigour of DELWP's action plan to address problems identified in its 2015 internal audit, and its implementation
- the effectiveness and efficiency of the long-term water quality monitoring carried out by MW and EPA across the Port Phillip and Western Port region.

Our audit did not evaluate drinking water, irrigation, wastewater or groundwater monitoring programs, or short-term monitoring programs implemented in response to specific matters.

## Conclusions

Individual long-term water quality programs in the Port Phillip and Western Port region are generally well designed and managed. However, the system operates as a collection of individual programs rather than as an organised network. The governance, coordination and oversight of the long-term water quality monitoring programs carried out in the region by DELWP, MW and EPA need to be improved significantly to ensure that the programs are planned and implemented in line with statewide policy objectives.

Although there are examples of good governance and coordination in some individual programs, no lead agency coordinates and oversees all individual programs throughout the region. As a result, there are gaps in monitoring coverage, there has been no evaluation against statewide policy objectives, and data is presented in a complex range of individual reports.

Poor governance processes in all agencies mean that the current status of some individual programs and their aims is unclear, and that recommendations from many reviews during the last decade have been only partly acted on. Long-term water quality data needs to be better managed and used. The available data, and its associated analysis, is not being used to its full potential. Data is often not shared through formal arrangements or not available in a timely or easily understood manner. Also, the comprehensiveness of quality assurance processes varies between programs, hindering the usability and comparability of data.

In terms of the statewide long-term water quality monitoring network, DELWP developed a comprehensive action plan to address the recommendations of its 2015 internal audit of water quality monitoring programs. It has effectively implemented all but one of the key recommendations from this plan. The outstanding action—relating to the development of a network performance framework—has been put on hold until the outcomes of this audit and of the current review of government's key water quality policy are known.

The three agencies have worked collaboratively throughout this audit, leading to early agreement about what the key problems are and the development of a joint agency action plan to address those problems. These activities are highly encouraging and commendable—they reflect a strong commitment to addressing the problems identified by this audit and to improving the effectiveness and efficiency of long-term water quality monitoring programs.

## Findings

### Water quality monitoring in the Port Phillip and Western Port region

#### Governance processes

Sound governance processes are required for the efficient and effective long-term water quality monitoring of waterways and bays in the Port Phillip and Western Port region. Although there are examples of some individual programs being coordinated and governed well, oversight of the individual long-term water quality monitoring programs in the region is deficient and there is inadequate coordination across all programs between the relevant agencies.

#### *Coordination*

MW, EPA and DELWP run at least nine long-term water quality monitoring programs on the inland, bay and marine waters of the Port Phillip and Western Port region. However, no lead agency is responsible for coordinating these programs. This is in contrast to the other nine catchment regions, where DELWP takes on a coordinating role. As a result, in the Port Phillip and Western Port region:

- there is no formalised cooperative approach to long-term water resource monitoring, assessment, evaluation and reporting against statewide policy objectives
- monitoring and reporting roles and responsibilities are unclear
- there are gaps in the comparability, accessibility and sharing of data between agencies across similar programs
- the agencies responsible for monitoring have limited consultation on the need for and use of data from each monitoring site.

The agencies have good arrangements in place for the planning, implementation and reporting of some individual programs, including Yarra Watch and nitrogen cycling monitoring in Port Phillip Bay. However, these arrangements do not extend to all programs. This has led to:

- limited connection between MW's inland fixed-site and EPA's marine fixed-site monitoring programs
- no core set of consistently monitored physico-chemical indicators for all long-term monitoring programs
- no clear link and interaction between EPA and MW biological monitoring programs in the region.

Water quality monitoring roles and responsibilities for the Port Phillip and Western Port region are not clear. The regulatory framework for water quality monitoring is complex and no formalised cooperative approach clarifies arrangements under the framework. The 2003 *State Environment Protection Policy (Waters of Victoria)* (SEPP (WoV))—government’s key water quality policy—and state and regional strategies do not clearly and comprehensively define roles and responsibilities for long-term water quality monitoring in the region.

MW is the waterway manager for the Port Phillip and Western Port region and carries out long-term water quality monitoring and reporting, but the regulatory framework does not clearly require MW to do this. DELWP’s 2013 Statement of Obligations and its waterway charter do not specify such obligations. This is a risk to long-term water quality monitoring programs in the region. SEPP (WoV) also does not clearly define roles in and responsibilities for long-term water quality monitoring.

### *Oversight*

Under the *Water Act 1989*, DELWP is responsible for the continual long-term assessment of water resources throughout the state and for reporting on this every five years. To meet this responsibility, it coordinates and oversees the delivery of three regional monitoring partnerships—which include catchment management authorities, water authorities and local councils—and its RiverMap program, in coordination with EPA.

However, these partnerships and programs do not cover most of the region or include monitoring that MW and EPA carry out in the region. DELWP does not formally oversee the MW and EPA long-term water quality monitoring programs, and MW and EPA do not formally share the data they generate, so it is not used and reported to its full potential. This is a gap in the current arrangements.

MW and EPA have carried out regular reviews of their individual programs. These reviews have led to improvements. However, poor governance processes within and between the agencies have led to the partial and inconsistent implementation of the recommendations from many of the reviews from the last decade.

Also, poor documentation of program aims and rationale has reduced the transparency of some regional long-term water quality monitoring programs. As a result, many stakeholders do not understand clearly the objectives of some programs.

## Aims and objectives

SEPP (WoV), the 2013 *Victorian Waterway Management Strategy* and MW's 2013 *Healthy Waterways Strategy* set statewide objectives and regional targets for long-term water quality monitoring. However, the long-term water quality monitoring programs in the Port Phillip and Western Port region are not clearly linked to these objectives and they have not been evaluated against them.

Agencies cannot provide adequate assurance that the programs in the Port Phillip and Western Port region are meeting policy objectives because:

- The last long-term comprehensive compliance report against SEPP (WoV) objectives was in 2007.
- In 2013, both the Commissioner for Environmental Sustainability and the Victorian Catchment Management Council reported that data available to assess and report long-term trends across the state was inadequate. DELWP reported that the raw data was available but had not been analysed, so limiting stakeholders' use of it.

There is no coordinated approach or framework that allows programs to be measured, mapped and evaluated against:

- the aims of individual programs
- regional strategy and statewide policy objectives
- clear and measurable performance indicators.

Some programs in the Port Phillip and Western Port region lack clearly stated aims. For example, EPA's fixed-site marine program has no clear aims, nor does it meet EPA's strategic requirements for its environmental assessment programs. EPA has prepared an Environmental Assessment Framework Program that clearly outlines the aims of its marine program, but this has not been published externally.

The 2003 SEPP (WoV) sets out indicators and quantitative objectives to protect the uses of the state's water resources of public importance. Setting regional water quality targets to progressively meet SEPP (WoV) water quality objectives requires improvement in the Port Phillip and Western Port region because:

- MW and EPA have no agreed process for setting regional targets in the Port Phillip and Western Port region and limited accountability for monitoring and meeting those targets.
- SEPP (WoV) does not specifically define what long-term monitoring programs are required to meet the policy objectives and who is responsible for them.

The current government review of SEPP (WoV) is looking at these matters.

## Data management, use and reporting

Data management, use and reporting across the agencies responsible for long-term water quality monitoring across the Port Phillip and Western Port region requires improvement. To be used effectively, the data produced by the monitoring programs needs to be:

- easily understood
- consistent across programs with similar aims
- accessible, analysed and reported in a timely and easily understood manner
- shared formally by all relevant key stakeholders.

### *Data management*

The management and use of data collected across the Port Phillip and Western Port region requires improvement, because:

- Relevant stakeholders do not always have easy and timely access to the right information for all programs.
- Data management systems have limited compatibility, with EPA, MW and DELWP having separate biological monitoring databases.
- Agencies do not share data effectively, which means that data is not being used to meet a range of reporting needs.
- Inconsistent quality assurance processes for collecting, collating and analysing data for programs with similar aims reduce data usability and comparability.

Since 2005, DELWP has consistently improved its quality assurance processes in its *Regional Water Management Partnerships*. This has improved data quality and consistency in the regions that the partnerships cover. However, the partnerships do not cover most of the monitoring in the Port Phillip and Western Port region. There is a lack of well-documented quality assurance systems or processes for collecting, storing, transferring and retrieving water quality data across the range of programs and databases within this region.

Although EPA's programs for the Port Phillip and Western Port region met most of better practice quality assurance elements for monitoring data, MW's quality assurance processes varied in consistency, quality and comprehensiveness, and require improvement.

Formal data-sharing arrangements between the three agencies and their long-term water quality monitoring programs are limited. As a result, the data collected by each agency is not being used to its full potential—instead, it is reported in a complex range of individual reports. DELWP has responsibility for coordinating a statewide water quality monitoring database, but the data collected by MW's extensive programs is not part of this database, resulting in a significant gap. DELWP and MW are currently finalising an agreement to address this matter.



### *Reporting*

Because agencies produce a range of individual reports for the Port Phillip and Western Port region, it is difficult to see whether:

- current water quality objectives in SEPP (WoV) are being met
- water quality in all areas of the state is improving or deteriorating
- water quality problems are emerging in some areas
- policy initiatives are improving long-term water quality effectively.

No overall performance reporting framework outlines the hierarchy of reporting needs for long-term water quality monitoring in the Port Phillip and Western Port region. This means that:

- The data outputs and information from each of the monitoring programs are not mapped against statewide reporting objectives and targets.
- Compliance with reporting obligations under SEPP (WoV) is not evident or assured.
- DELWP does not adequately use the data collected by MW in its statewide long-term water resource assessments.

There are some good examples of better-practice reporting for individual programs in the Port Phillip and Western Port region. Reporting by EPA and MW of physico-chemical and bacteriological data collected in the Port Phillip region is:

- reported using a 'one-stop shop' approach, as all data is reported on the same website
- accessible to all relevant stakeholders
- easily understood
- clearly linked to policy objectives
- reported in a timely manner.

MW's long-term reporting about its individual physico-chemical monitoring programs also provides easily accessible and understood information about whether water quality is improving or deteriorating and whether catchment and waterway work is effective in improving water quality. However, not all key programs have consistently clear reporting, and all agencies need to take further action to improve the quality, consistency and simplicity of long-term water quality monitoring of all programs.

DELWP, MW and EPA are now in the process of mapping the monitoring data they produce against state policy objectives to simplify the current complicated reporting arrangements.

## Initiatives and reviews to improve water quality monitoring

A range of recent initiatives and reviews have been, or are being, implemented to improve long-term water quality monitoring in the Port Phillip and Western Port region and the state.

The timely and effective implementation of the recommendations arising from these initiatives and reviews should address the gaps identified by this audit and by DELWP's internal audit in 2015.

### DELWP internal audit

DELWP carried out an internal audit of its water quality monitoring programs in January 2015 to prepare for this audit. DELWP's audit highlighted some gaps and inadequacies in its monitoring network, some of which have been identified in other reviews.

DELWP prepared a comprehensive action plan to address the recommendations arising from its audit. DELWP has acted effectively on all but one of the audit recommendations.

A key recommendation to develop a water quality performance framework—which sets out clear objectives, roles and responsibilities for reporting performance, as well as what water quality data is required—has not yet been addressed. Action to address the recommendation has been put on hold pending the outcomes of this audit and the review of SEPP (WoV).

Effective implementation of this framework will be a critical step in addressing a range of gaps and inadequacies identified by both DELWP and this audit.

### Joint agency working party

Early in the audit process, DELWP, MW and EPA formed a joint working party to address matters arising from this audit. As a result, all agencies agreed early on the key problems preventing effective and efficient long-term water quality monitoring in the Port Phillip and Western Port region.

The agencies held workshops to further look at the matters raised in this audit and to prepare a comprehensive joint agency plan to address them.

## Recommendations

Number	Recommendation	Page
1.	That the Department of Environment, Land, Water & Planning, in conjunction with Melbourne Water and the Environment Protection Authority Victoria, lead action to improve the governance of long-term water quality monitoring programs across the Port Phillip and Western Port catchment region by: <ul style="list-style-type: none"> <li>establishing a cross-agency committee to coordinate and oversee long-term water quality monitoring programs for the region</li> <li>developing an overarching monitoring, evaluation and reporting framework for long-term water quality monitoring in the Port Phillip and Western Port region</li> <li>developing agreements that facilitate the effective and efficient sharing of data</li> <li>reviewing the quality assurance processes supporting data collection, collation and analysis to ensure consistency with better practice principles</li> <li>exploring the feasibility and options of developing a publicly accessible report card system that coordinates the publishing of all relevant physico-chemical, biological and recreational water quality monitoring results and analysis across the region.</li> </ul>	20
2.	That the Department of Environment, Land, Water & Planning implements all actions from its internal audit, subsequent 2015 review and the joint agency action plan, where it is identified as the lead agency, and ensures that the relevant recommendations are tracked by and reported to its internal risk and audit committee.	28
3.	That the Environment Protection Authority Victoria reviews its implementation time frames and resourcing to ensure the efficient and timely implementation of its relevant Environmental Assessment Reform process outcomes, once the outcomes of Environment Protection Authority Victoria's Strategic Review are known.	28

## Submissions and comments received

We have professionally engaged with the Department of Environment, Land, Water & Planning, Melbourne Water and the Environment Protection Authority Victoria throughout the course of the audit. In accordance with section 16(3) of the *Audit Act 1994* we provided a copy of this report to those agencies and requested their submissions or comments. We also provided a copy of the report to the Department of Premier & Cabinet for comment.

We have considered those views in reaching our audit conclusions and have represented them to the extent relevant and warranted. Their full section 16(3) submissions and comments are included in Appendix A.



# 1 Background

## 1.1 The importance of long-term water quality monitoring

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Monitoring water quality over the long term requires consistent, regular and ongoing gathering of water quality data to provide information and knowledge about the conditions of waterways and bays. The key aims of a better practice long-term water quality monitoring network—a coordinated system of long-term water quality monitoring programs—should be to collect data that allows:

- baseline conditions to be established
- current water quality and changing trends to be assessed
- the early detection of emerging problems with water quality
- compliance with policy objectives to be assessed
- evaluation of the success of policies, management interventions and activities in improving water quality.

Data collected must also be quality assured and accessible, and reported in a timely and easily understood manner for these aims to be met.

It is important to understand the status and long-term trends in the quality of Victoria's water to maintain and protect the health of ecosystems and the wellbeing of Victorians who use our waterways and bays. There are also broader economic, social and environmental benefits, because good water quality supports a range of recreation, tourism and fishery activities.

## 1.2 Long-term water quality monitoring programs across Victoria

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Long-term water quality monitoring has evolved significantly since 1975, when a range of government and private organisations were responsible for its introduction. In 1981, the first steps were taken to set up a monitoring framework and to develop a network approach to monitoring water quality across the state.

### 1.2.1 Current long-term water quality monitoring programs

A range of programs are in place throughout Victoria's 10 catchment regions, which are shown in Figure 1A. Monitoring is carried out in freshwater systems (rivers, streams and lakes), estuarine systems (where rivers flow into bays and oceans) and marine bays.

**Figure 1A**  
**Victoria's catchment regions**



Source: North East Catchment Management Authority.

Long-term monitoring is carried out at fixed sites on a continuous basis and at selected sites as required. Various water quality indicators are monitored, depending on the objective of the monitoring program. Programs monitor one or a combination of indicators:

- physico-chemical indicators such as pH, dissolved oxygen, turbidity, electrical conductivity, nutrient and metal levels, which are important indicators of waterway and bay health
- bacteriological indicators and blue-green algae levels—generally used to determine the safety of the water for recreational activities, including swimming and boating
- biological indicators, such as the number and type of aquatic insects, which complement physico-chemical water quality measurements as indicators of waterway and bay health.

### 1.2.2 Monitoring regional catchments

Long-term water quality monitoring throughout the state takes place under two different governance models and sets of programs.

## The nine rural catchment regions

The Department of Environment, Land, Water & Planning (DELWP) and catchment management authorities (CMA), who are the designated waterway managers, coordinate monitoring in Victoria's nine rural regional catchments. DELWP monitors Victoria's environmental water quality through its Victorian Water Quality Monitoring Network, which is largely delivered through two key programs and partnerships:

- physico-chemical monitoring delivered through its Regional Water Monitoring Partnerships (RWMP)
- RiverMap, a biological monitoring program delivered in partnership with Environment Protection Authority Victoria (EPA).

DELWP coordinates three RWMPs with regional CMAs, water corporations and local councils. In 2013, the RWMPs involved 40 partners who monitored in-stream physico-chemical indicators at about 360 sites. The aim of the program is to help DELWP and the partners meet their responsibilities under the *Water Act 1989* and related government policies, through a coordinated and cooperative cost-sharing framework and approach.

DELWP's partnership with EPA to deliver biological monitoring of the state's waterways began in the early 1970s. In 2013, about 77 sites were monitored through the RiverMap biological monitoring program. This is a four year \$3.2 million program, which began in 2012 and is largely funded by DELWP and coordinated by EPA.

RiverMap has three components:

- modelling to predict waterway health conditions
- monitoring long-term fixed sites
- identifying water quality hotspots.

In addition to these programs, *Waterwatch*, a community monitoring program, is overseen by DELWP, CMAs and local councils in all catchments, except in the Port Phillip and Western Port region, where it is largely overseen by Melbourne Water (MW). This program aims to increase community understanding and ownership of local waterways. More than 600 volunteers participate, monitoring about 1 000 sites across the state every year.

## The Port Phillip and Western Port region

The Port Phillip and Western Port region spans about 12 000 km<sup>2</sup> and includes more than 8 000 km of waterways, including rivers, creeks and estuaries. The waterways of the region flow to 600 km of regional coastline and then into the marine systems of Port Phillip Bay and Western Port, as shown in Figure 1B.

**Figure 1B**  
**Port Phillip and Western Port catchment region**



Source: [www.ppwcm.vic.gov.au](http://www.ppwcm.vic.gov.au)

The region's bays and waterways are some of Victoria's most important natural assets. They support highly valuable and diverse aquatic habitats and ecosystems. Importantly, the region is home to three Ramsar wetlands, considered to be of international significance, along with seven marine protected areas. The waterways and bays of the Port Phillip and Western Port region are also economically vital to the state and to the wellbeing of its residents, because the bays support commercial and recreational fishing, tourism, aquaculture and port operations, and receive more than 100 million visitors a year.

MW carries out most of the long-term inland waterway water quality monitoring for this region. Its long-term water quality monitoring programs are outlined in Figure 1C. The EPA also carries out a range of physico-chemical, biological and bacteriological long-term water quality monitoring programs in this region. It carries out biological monitoring at a few inland sites on behalf of DELWP as part of the Index of Stream Condition program. Its Port Phillip Bay physico-chemical monitoring program is supplemented by the *Port Phillip Bay Environmental Management Plan 2002* monitoring program overseen by DELWP.



**Figure 1C**  
**Long-term water quality programs carried out by Melbourne Water and the Environment Protection Authority Victoria in the Port Phillip and Western Port region**

	Melbourne Water	Environment Protection Authority Victoria
Physico-chemical	About 134 sites on inland waterways every month	Seven marine sites—five in Port Phillip Bay and two in Western Port Bay
Biological	About 1 000 sites monitored at least once over the last 20 years	About six sites in the region
Bacteriological	About 134 sites on inland waterways every month <i>Yarra Watch</i> is carried out by MW but led by EPA	36 beaches around Port Phillip Bay ( <i>Beach Report</i> ) Four sites on the Yarra River ( <i>Yarra Watch</i> )
Sediment loads	14 sites on key waterways entering the bays	

*Note:* Public monitoring of 235 waterway and two estuarine sites in this region is carried out through the *Waterwatch* program, which is largely coordinated by MW and funded by DELWP.

*Source:* VAGO based on information provided by MW and EPA.

## 1.3 Victoria's water quality monitoring policy and regulatory framework

### 1.3.1 Legislation

The *Water Act 1989* outlines the relevant minister's responsibilities with regard to water quality monitoring and reporting. The Act requires the minister to deliver a program of long-term water resource assessments, which includes collecting, collating, analysing and publishing information about:

- water quality (including salinity)
- in-stream uses of water
- current and historical condition of waterways and aquifers
- anything else that the minister deems appropriate.

The minister must ensure that information about the water resources assessment program is made publicly available every five years.

### 1.3.2 State Environment Protection Policy

The *State Environment Protection Policy (Waters of Victoria)* (SEPP (WoV)) provides the framework for the protection of the uses and values of Victoria's fresh and marine waters. The policy identifies a set of agreed values and uses for specific water bodies, including bays, rivers, estuaries and lakes, which require protection. It outlines specific water quality indicators to be monitored and quantitative objectives for each indicator that must be met to protect the values and uses identified. SEPP (WoV) sets out recommended actions to achieve these objectives.

### 1.3.3 Key strategies and plans

#### *The Victorian Waterway Management Strategy 2013*

The *Victorian Waterway Management Strategy 2013* was developed by DELWP. It outlines objectives and targets to protect and maintain waterway health across Victoria, including water quality monitoring. It is intended to be supported by the development of specific regional waterway strategies developed by the waterway managers for each of the 10 catchment management regions in the state.

#### *Melbourne Water's regional Healthy Waterways Strategy 2013*

MW prepared the *Healthy Waterways Strategy 2013* for the Port Phillip and Western Port region to support the objectives and targets of the *Victorian Waterway Management Strategy 2013*. The strategy:

- outlines a vision of integrating healthy and valued waterways with the broader landscape and enhancing life and liveability
- defines targets and values, designed to inform MW's investment in waterway health and monitoring activities.

#### *The Port Phillip Bay Environmental Management Plan 2002*

The *Port Phillip Bay Environmental Management Plan 2002* was developed by DELWP and outlines the environmental management framework for the bay, including monitoring requirements. DELWP is leading a review of this plan.



*Merri Creek in Melbourne's northern suburbs.*

### 1.3.4 Roles and responsibilities

#### Department of Environment, Land, Water & Planning

DELWP is mainly responsible for managing Victoria's waterways sustainably and setting up the state policy framework for waterway management. To meet these responsibilities, it developed the 2013 *Victorian Waterway Management Strategy* and the *Victorian Water Management Program*. It is also leading the review of the 2003 SEPP (WoV) and the Victorian Water Quality Monitoring Network. It is also responsible for ensuring a continuous water resource assessment program that provides for collecting, collating, analysing and publishing information about water quality is in place, as required under the *Water Act 1989*. DELWP is also responsible for coordinating and maintaining a statewide database for water quality data.

#### Melbourne Water

Under the *Water Act 1989*, MW is the designated waterway manager for the Port Phillip and Western Port region and its responsibilities include:

- preparing a regional waterway strategy
- preparing and introducing programs and activities that protect or improve water quality
- monitoring and reporting on water quality.

MW also plays an important role in coordinating the Port Phillip and Western Port *Waterwatch* program, which is delivered by community groups throughout the region.

#### Environment Protection Authority

EPA aims to protect and improve water quality. It is responsible for working with DELWP, as its technical advisor, to develop water policies to achieve this aim. This includes identifying what attributes of marine and inland waterways require protection and setting water quality indicators and objectives to achieve this. The attributes and the water quality objectives required to protect them are then specified in SEPP (WoV). Under the 2003 SEPP (WoV), EPA is also responsible for reporting publicly on compliance with the policy's water quality objectives.

## 1.4 Recent reviews of water quality monitoring

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In January 2015, to prepare for this audit, DELWP carried out an internal audit of its water quality monitoring programs. In October 2015, it carried out a comprehensive review of water quality monitoring undertaken as part of the RWMPs to fulfil its responsibilities under the 2013 *Victorian Waterway Management Strategy* and its 2015 internal audit recommendations. These reviews highlighted current programs' gaps and inadequacies, some of which had been previously identified, including:

- the absence of clear objectives to inform monitoring programs
- the lack of a documented framework for measuring performance against government's targets and objectives related to water resources

- inadequate practices for the management of contracts with field service and laboratory service providers
- the lack of a program-wide stakeholder engagement plan.

DELWP prepared an action plan to address the recommendations arising from its internal audit, with actions intended to be implemented by December 2015.

DELWP's internal audit did not cover most water quality monitoring in the Port Phillip and Western Port region because DELWP has limited coverage of inland water quality monitoring in the region.

## 1.5 Audit objective and scope

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The objective of this audit was to look at the effectiveness and efficiency of water quality monitoring programs and partnerships dealing with Victoria's water resources.

The audit looked at:

- DELWP's internal audit and the adequacy of the action plan to address the identified problems
- the effectiveness and efficiency of long-term water quality monitoring by MW, EPA and DELWP in the Port Phillip and Western Port region.

The audit did not evaluate drinking water, irrigation, wastewater or groundwater monitoring programs, or short-term monitoring programs introduced in response to specific problems.

## 1.6 Audit method and cost

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The audit was conducted in accordance with the Australian Auditing and Assurance Standards. Pursuant to section 20(3) of the *Audit Act 1994*, unless otherwise indicated, any persons named in this report are not the subject of adverse comment or opinion.

The audit team gathered evidence by:

- interviewing DELWP, MW and EPA staff
- reviewing documents provided by DELWP, MW and EPA
- reviewing relevant legislation and good practice guidance
- visiting selected monitoring sites.

The cost of the audit was \$410 000.

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# 2

## Effectiveness of current long-term water quality monitoring

### At a glance

#### Background

Understanding water quality and trends over the long term in Victoria's inland waterways and bays is critical to the protection and health of ecosystems. It is also vital to the sustainability of many activities and industries, including fishing, recreation and tourism, which rely on good water quality.

#### Conclusion

Individual long-term water quality programs are generally well designed and managed in the Port Phillip and Western Port region. However, the monitoring system operates as a collection of individual programs rather than as an organised network designed to meet statewide policy needs. As a result, not all policy needs are being adequately met.

#### Findings

- Individual long-term water quality programs in the region are generally well planned and adequately managed.
- Individual long-term water quality programs and their aims are not clearly linked to statewide policy objectives.
- Agencies have no formal cooperative approach to monitoring, reporting and evaluating the individual monitoring programs in the region.
- Agencies do not share and use data enough to effectively meet reporting needs.

#### Recommendation

That the Department of Environment, Land, Water & Planning lead the implementation of processes and actions to improve the coordination, governance and oversight of long-term water quality monitoring programs across the region, including the development of an overarching performance and evaluation framework.

## 2.1 Introduction

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To protect ecosystem and waterway health, it is important to understand the long-term condition and trends in water quality in Victoria's inland waterways and bays. Many economic and industrial activities that generate revenue for the state, including tourism, recreational and fishing activities, rely on good water quality and an understanding of current and emerging issues.



*Photograph courtesy of Melbourne Water.*

Many programs and agencies are involved in monitoring water quality in the Port Phillip and Western Port region. Achieving a sound statewide and regional understanding of water quality that meets policy objectives requires effective arrangements for coordinating these activities in a network of complementary programs, partnerships and reporting arrangements. This requires sound governance and oversight processes.

## 2.2 Conclusion

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Most individual long-term water quality programs in the Port Phillip and Western Port region are well designed and managed. However, the current system is a collection of individual programs rather than an organised network. The Department of Environment, Land Water & Planning (DELWP), Melbourne Water (MW) and the Environment Protection Authority Victoria (EPA) must significantly improve the governance, coordination and oversight of their long-term water quality monitoring programs in the region to ensure that they collectively meet statewide policy objectives.

Although there are examples of good governance and coordination between some individual programs, no lead agency is responsible for coordinating and overseeing all programs in the region. There is no formalised collaborative approach to planning, reporting and evaluating long-term monitoring of water quality. As a result, there are gaps in coverage, there has been no evaluation against statewide policy objectives, and reporting takes place through several individual reports. Poor governance processes in all agencies have also led to a lack of clarity about the status of some individual programs and to recommendations from many reviews from the last decade being only partly addressed.



The long-term water quality data collected in the region has to be managed and used better. The available data, and its associated analysis, is not being used to its full potential. Often, data is not available in a timely manner or not easily accessed. Agencies do not formally share data enough and quality assurance processes in programs vary, hindering data quality and comparability.

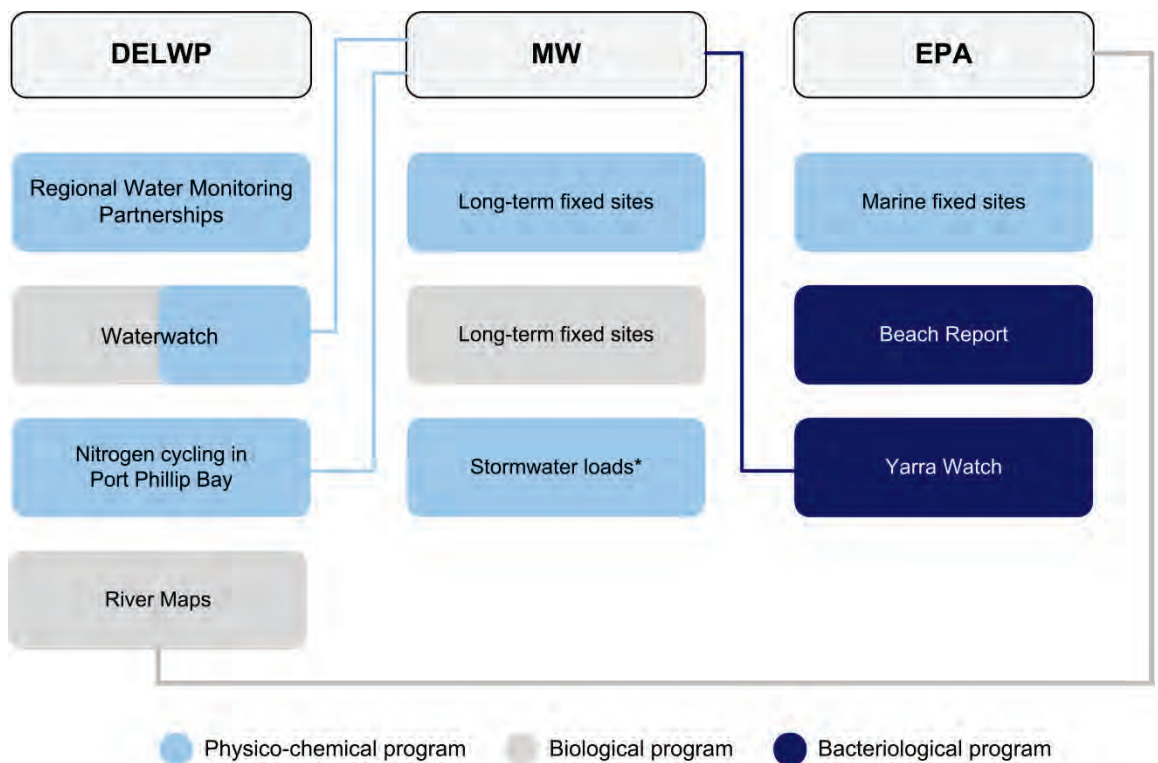
## 2.3 Governance arrangements

Sound governance processes are required for efficient and effective long-term water quality monitoring in the Port Phillip and Western Port region.

### 2.3.1 Coordination

MW, EPA and DELWP carry out at least nine individual long-term water quality monitoring programs in inland, bay and marine waters, as shown in Figure 2A. Oversight of these programs is deficient and the relevant agencies do not coordinate enough.

**Figure 2A**  
**Long-term water quality monitoring programs in the Port Phillip and Western Port region**



(a) Lines indicate program coordinated between the two agencies.

(b) \* Program under review.

Source: VAGO.

No lead agency is responsible for coordinating all the monitoring in the region. This is in contrast to the other nine catchment regions, where DELWP takes on a lead role. As a result:

- there is no formalised cooperative approach to long-term water quality monitoring, assessment, reporting and evaluation through an overall monitoring, performance and evaluation framework
- there is no identification and assessment of gaps and inefficiencies in the entire set of programs in the region
- there are gaps in the comparability, reliability, and accessibility of data across all similar programs and between the three agencies
- there is limited consultation on the need for and use of data from each monitoring site across the agencies carrying out monitoring in the region
- there is limited sharing of costs according to need.

As a result of this lack of coordination, programs in the region are generally planned, designed and implemented in isolation. This has led to a range of gaps and inadequacies:

- There is no documented agreement or formal communication between DELWP and MW about how and to what extent MW's water quality data is used by DELWP to report on long-term water resource condition and trends across the state. As a result, data collected by MW is not being used to its full potential.
- No core set of indicators is monitored consistently across all physico-chemical and biological programs run by all agencies.
- There is no clear link and interaction between EPA and MW biological monitoring programs in the region. As a result, each agency is unclear where the other one monitors and why.
- There are some gaps in the connection between the EPA and MW inland fixed-site and marine fixed-site monitoring programs, making it difficult to assess the impact of land-based activities on water quality in the bays where these gaps exist.

Although there is some formal coordination of individual programs between agencies—such as between MW and EPA for *Yarra Watch*, and between MW and DELWP for the nitrogen cycling program in Port Phillip Bay—there is no coordination across the whole set of programs and agencies. Informal relationships exist for some programs. However, this depends on the vigilance of staff. Without formalised agreements, there is a risk that these relationships will end as a result of staff changes.

MW is the waterway manager for the Port Phillip and Western Port region and carries out long-term water quality monitoring and reporting but has no clear obligation under the regulatory framework to do this. Nor does DELWP's 2013 Statement of Obligations or its waterway charter specify such obligations. This is a risk to the continuation of long-term water quality monitoring programs in the region.



### 2.3.2 Oversight

DELWP oversees long-term physico-chemical water quality monitoring programs in nine of the 10 regional catchments through three formalised Regional Water Management Partnerships (RWMP). These involve over 40 partners, including catchment management authorities, water authorities and local government. DELWP also oversees long-term biological monitoring across the state through its contractual agreement with EPA. However, these arrangements and programs do not cover most of the Port Phillip and Western Port region and DELWP's oversight of the other long-term water quality monitoring in the Port Phillip and Western Port region by MW and EPA is also limited.

Because of poor oversight of and documentation of program aims for MW and EPA's fixed-site monitoring programs, the status of some Port Phillip and Western Port region long-term programs is unclear. This problem is mirrored in programs carried out by DELWP in the nine other regional catchments.

Both the 2013 *Victorian Waterway Management Strategy* and the 2013 *Healthy Waterways Strategy* require an adaptive management approach to ensure that monitoring programs are continually improved. This requires regular reviews of the aims, design and implementation of monitoring programs. MW and EPA have carried out extensive and regular reviews of their individual programs. However, poor processes to oversee the implementation of recommendations within and across the two agencies have led to the partial and inconsistent implementation of recommendations. Matters on which recommendations were made in reviews in the early to mid-2000s are still being identified as gaps and deficiencies in 2015. These include:

- no agreed or clearly defined targets and objectives in the biological physico-chemical and marine monitoring programs
- gaps in coverage in the inland and marine programs
- poor reporting of outputs
- limited evaluation of programs
- poor governance mechanisms.

These same problems have been identified by this audit with respect to the monitoring carried out in the Port Phillip and Western Port region and in DELWP's 2015 internal audit of its water quality monitoring network.

EPA and DELWP effectively track and report on the implementation of recommendations from internal and external audits through their risk and audit committees. However, recommendations from internal or external water quality reviews are not monitored under the same, or any, process by these agencies. MW had no formalised governance mechanism to track and report on the implementation of recommendations from its extensive reviews of its monitoring programs. The same governance processes that EPA and DELWP use to track audit recommendations should be applied to both internal and external reviews carried out by all agencies.

## 2.4 Aims and objectives for monitoring

### 2.4.1 Aims and objectives



A water sample from the Yarra River.

Agencies cannot provide adequate assurance that the programs implemented in the Port Phillip and Western Port region are meeting policy objectives or better practice aims for long-term water quality monitoring.

DELWP, EPA and MW have not linked or evaluated the effectiveness of their long-term monitoring programs against the policy objectives set out in the 2003 *State Environment Protection Policy (Waters of Victoria)* (SEPP (WoV)) and the 2013 *Victorian Waterway Strategy*. As a result, they cannot assess whether the current monitoring programs are adequately:

- informing assessments of catchment or waterway management programs and progress against statewide objectives for long-term water quality
- informing long-term assessments of compliance with the SEPP (WoV) objectives
- detecting emerging problems with water quality
- contributing to public reporting requirements, including the State of Environment reports of the Commissioner for Environmental Sustainability and the catchment condition reports of the Victorian Catchment Management Council.

This audit identified that the monitoring programs are not adequately meeting at least two of these objectives:

- The last comprehensive compliance report against SEPP (WoV) objectives was in 2007.
- In 2013, both the Commissioner for Environmental Sustainability and the Victorian Catchment Management Council reported that there was not enough data available to assess long-term trends across the state.

There is currently no formal cross-agency performance monitoring and evaluation framework for the Port Phillip and Western Port region that allows agencies to collectively:

- document the individual program aims and overall aims of the set of water quality monitoring programs in the Port Phillip and Western Port region, including how they link to statewide policy priorities and objectives
- map monitoring program coverage throughout the region and know what data they collect and how the data is used for various performance reports
- identify and report any gaps in meeting statewide objectives
- identify measurable performance indicators for the set of monitoring programs
- document roles and responsibilities for monitoring, reporting and reviewing.

By developing this framework, MW, EPA and DELWP will be able to clearly identify any gaps in monitoring coverage and meeting policy needs, provide clarity of purpose to each individual program and create a cohesive network of monitoring programs in the region.

During this audit, the three agencies began a process to develop a shared understanding of the strategic policy framework for monitoring water quality throughout the state, specifically focusing on the Port Phillip and Western Port region. They are in the process of mapping how each of the individual regional programs is linked to regional targets and statewide policy objectives.

### 2.4.2 *State Environment Protection Policy (Waters of Victoria) water quality objectives*

SEPP (WoV) is the key policy for water quality. Its purpose is to identify and protect the values and beneficial uses of the waterways and bays that the community deems important. Setting of regional targets under SEPP (WoV) requires improvement.

There are no agreed process and limited accountability for implementing and meeting regional targets in the urbanised areas of the Port Phillip and Western Port region. SEPP (WoV) states that, where the environmental water quality objectives cannot be met in the lifetime of the policy, regional targets should be set for these areas to drive progressive rehabilitation of environmental quality but does not define how to do this or who is responsible.

Some SEPP (WoV) water quality objectives are aspirational and it is recognised that they might not be achievable within the 10-year time frame of the policy. It is not made clear which objectives these are, and how these should be reported against in terms of compliance. This limits the ability of agencies to report progressive improvement in water quality.

SEPP (WoV) is not clear and transparent about what long-term monitoring programs have to do to achieve the objectives of the policy, and about who is responsible for ensuring that they achieve these objectives.

DELWP has indicated that the current review of SEPP (WoV) will improve the setting of measurable and attainable objectives and will also provide clarity about responsibilities for monitoring water quality.

## 2.5 Data management and reporting

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Good long-term water quality data management and reporting is vital because it ensures that datasets can meet policy objectives, are used effectively in decision-making and are easily accessed and used by a range of stakeholders.

Currently, the use and management of the long-term water quality data collected for the Port Phillip and Western Port region is inadequate because:

- stakeholders sometimes lack easy and timely access to the right information
- data management systems have limited interoperability, as evidenced by the individual biological monitoring databases operated by EPA and MW, which impedes data collation and analysis
- agencies do not share data enough, which means that data is not being used to meet a range of reporting needs
- quality assurance processes for collecting, collating and analysing data in long-term water quality monitoring programs with similar aims are inconsistent, reducing the reliability and comparability of data.

### 2.5.1 Data quality assurance

Quality assurance is needed to ensure that data meets its required purpose. This includes defining standards and data quality objectives, and the documentation of the system itself. It assures those using the data that the data is accurate, meaningful and of the required quality.

Quality assurance encompasses quality control and many other aspects, including:

- a fully documented quality system
- a documented sampling and analysis plan
- sampling using standardised and consistent procedures that are documented in the sampling and analysis plan
- ensuring that equipment is well maintained, cleaned and fully calibrated before use by means of specific, fully documented procedures
- ensuring that people who carry out the sampling are competent and trained
- having dedicated systems, that carefully process and store data using standardised procedures, and allow data to be retrieved later.

There are gaps and inadequacies in the quality assurance processes of the individual monitoring programs in the Port Phillip and Western Port region. In 2005, DELWP began introducing standard quality assurance processes for its three RWMPs so that some confidence existed for all data collected by different partners. However, the RWMPs do not cover most of the Port Phillip and Western Port region. There is a lack of well documented quality assurance systems or processes within this region.

EPA has made significant progress towards developing a fully documented quality assurance system. Its programs for the Port Phillip and Western Port region met most better practice quality assurance elements for monitoring data. MW's documentation for its quality assurance processes varied in consistency, quality and comprehensiveness, and requires improvement.

The establishment of a comprehensive data quality management framework defining consistent better practice quality assurance procedures will significantly improve confidence in data reliability and use in all the agencies. EPA's quality assurance processes should provide the building blocks for this.

Formal arrangements for sharing data between all three agencies are required to ensure that all data collected is used as effectively as possible. The three agencies share data in a limited way. MW and EPA share Port Phillip region data through a formal agreement for the *Yarra and Bays* website and the *Report Card* initiative, while MW and DELWP do not formally share data. DELWP is responsible for coordinating a statewide water quality monitoring database, but MW's extensive data is not included. This leads to a significant gap in the data held in the statewide database. DELWP and MW are currently finalising an agreement to incorporate MW's data into the statewide database.

## 2.5.2 Reporting

Performance reporting plays an important role in properly managing data, increasing its usability and accessibility, and providing accountability to the public on the expenditure on and outcomes of long-term water quality monitoring programs.

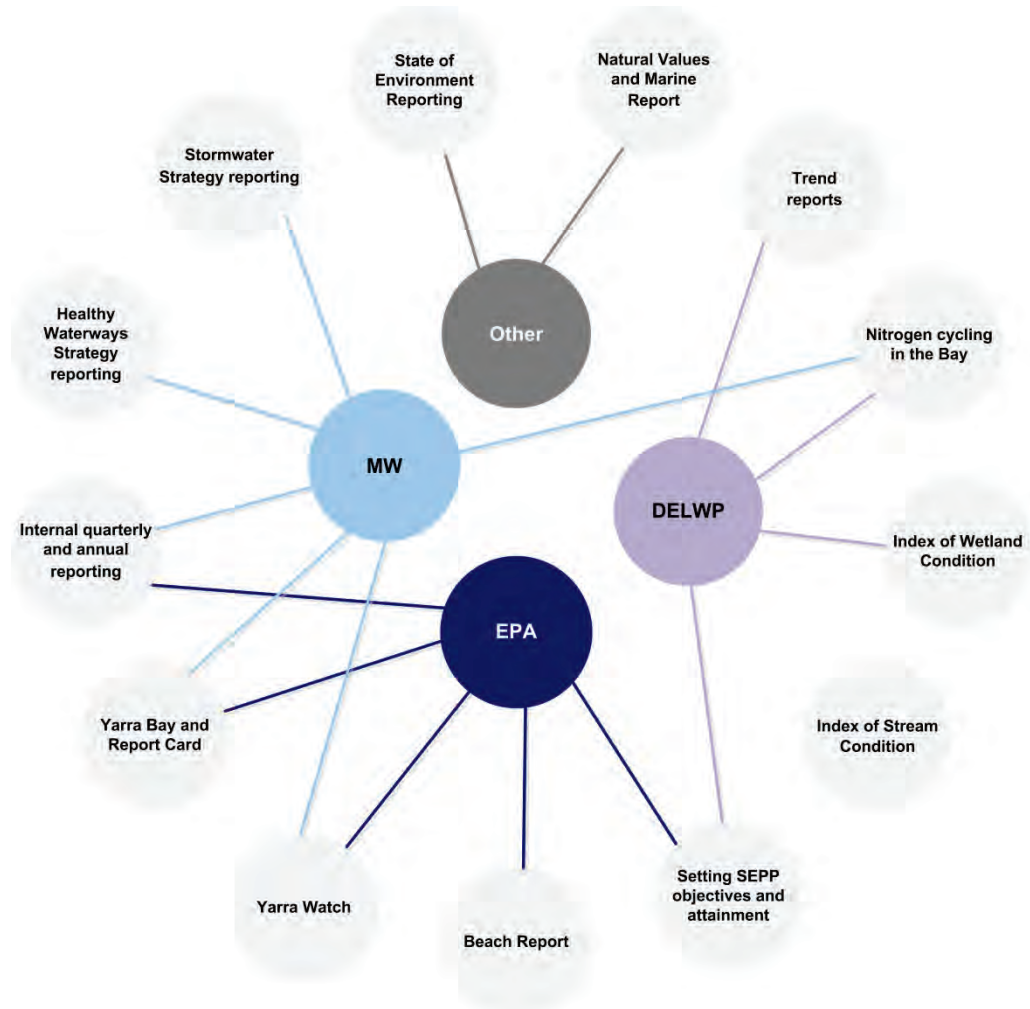
Although agencies produce valuable information about water quality, this data is not used as effectively as it could be. No overall performance reporting framework identifies the hierarchy of reporting needs to meet policy objectives. Rather, data is reported through a series of individual agency reports and websites, as shown in Figure 2A. As a result:

- compliance with reporting obligations under SEPP (WoV) is not evident or assured
- there is no documented agreement between MW and DELWP to ensure that MW's data in DELWP's statewide water resource assessment reporting is used consistently and comprehensively
- data collected from long-term biological monitoring programs throughout the state are reported in several separate MW, DELWP and EPA reports, hindering the understanding of state trends
- data collected from the long-term inland and marine monitoring programs are not reported in one consolidated report but through a range of reports which have changed in focus over time, reducing their usefulness for coordinated oversight and reporting on the impact of land-based activities on water quality in the bays.

Roles in and responsibilities for long-term monitoring of water quality are not clear. This hinders the effective reporting of data in the Port Phillip and Western Port region:

- Obligations for water quality reporting under the legislative and policy framework are not explicit and are open to interpretation.
- MW, as the waterway manager, has no statutory or corporate obligation to report on long-term monitoring of water quality.
- SEPP (WoV) states that EPA must report publicly on progress towards meeting environmental quality objectives, but does not specify how often or what should be reported.
- No specific obligations or objectives have been defined for the State of Environment reporting. As a result, reports are based on what data is available, rather than reporting against specific aims or objectives.

**Figure 2B**  
**Reporting framework for long-term monitoring of water quality**



Source: Output of DELWP, EPA and Melbourne Water workshop, modified by VAGO.

There are some examples of better practice performance reporting in the region that have led to easier access and use of data by key stakeholders. These include the *Cleaner Yarra and Port Phillip Bay* website, a joint initiative of EPA, MW and DELWP.

This reporting allows:

- data collected by MW and EPA to be reported in the one place
- timely responsive action based on data
- data to be reported in an easily understood format
- data to be easily accessed.

These same attributes need to be applied to the reporting of all long-term water quality monitoring programs in the Port Phillip and Western Port region.

### 2.5.3 Data use

One of the key outcomes of long-term water quality monitoring should be to influence waterway management decisions and strategic initiatives to improve waterway health. Timely access to high-quality data is critical to achieving this because it provides a robust evidence base for making decisions.

Both EPA and MW use water quality data reported from their key programs to:

- inform their operational decision-making to improve waterway health
- inform their strategic decisions through the development of key waterway health policies, programs and strategies.

MW uses water quality data to assess river water quality and trends as evidenced by its *Healthy Waterways Trajectories Project*, which underpinned the development of Melbourne Water's 2013 *Healthy Waterways Strategy*. EPA uses the *Beach Report* and *Yarra Watch* data to provide timely information and warnings in relation to water safety for public recreation, to investigate pollution incidents where recreational water quality objectives are consistently breached, and in the technical advice it provides to DELWP for the review of state water policy.

However, delays in reporting long-term water quality data have resulted in a disconnect between the data collected and the setting of waterway health priorities. For example, the Index of Stream Condition reports of water quality condition across the state have generally been released three years after the monitoring data period. This makes responsive decision-making difficult in terms of:

- knowing whether waterway and catchment works and policy initiatives have been effective in improving water quality
- understanding emerging issues or water quality 'hotspots'.

Analysing, collating and reporting all long-term water quality data in a timely and efficient way will help key stakeholders to make timely decisions about catchment and waterway health works, and to address areas of highest and emerging risk.

MW, EPA and DELWP have begun a process to map and formalise what water data is needed to meet policy objectives and how the agencies use and share water data. This will help to ensure that data is exploited to its maximum potential.



## Recommendation

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1. That the Department of Environment, Land, Water & Planning, in conjunction with Melbourne Water and the Environment Protection Authority, lead action to improve the governance of long-term water quality monitoring programs across the Port Phillip and Western Port catchment region by:
    - establishing a cross-agency committee to coordinate and oversee long-term water quality monitoring programs for the region
    - developing an overarching monitoring, evaluation and reporting framework for long-term water quality monitoring in the Port Phillip and Western Port region
    - developing agreements that facilitate the effective and efficient sharing of data
    - reviewing the quality assurance processes supporting data collection, collation and analysis to ensure consistency with better practice principles
    - exploring the feasibility and options of developing a publicly accessible report card system that coordinates the publishing of all relevant physico-chemical, biological and recreational water quality monitoring results and analysis across the region.
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# 3 Initiatives and reviews to improve long-term water quality monitoring

## At a glance

### Background

Continuous review and improvement is an important aspect of effective water quality monitoring program management. This is particularly important when programs are long term and involve a range of agencies.

### Conclusion

There are a number of individual and collaborative initiatives and reviews across the Department of Environment, Land, Water & Planning (DELWP), Melbourne Water (MW) and the Environment Protection Authority Victoria (EPA) that, if implemented effectively, should drive improvements in long-term monitoring of water quality in the Port Phillip and Western Port region and state. It is encouraging that, as a result of this audit, agencies are working collaboratively to address the problems identified.

### Findings

- A range of reviews, recently completed and under way, should drive improvements in long-term water quality monitoring throughout the state.
- In 2015, DELWP carried out a comprehensive internal audit of its water quality monitoring network and has satisfactorily addressed all but one of its recommendations. This one recommendation was delayed to incorporate the outcomes of this audit and other reviews.
- In 2014, EPA completed a review of its environmental assessment function. Implementation of most actions is on hold until a strategic review of EPA's functions is complete.

### Recommendations

- That DELWP implements all actions from its internal audit, scientific review and joint agency action plan effectively and efficiently.
- That EPA reviews its time frames and resourcing to ensure the efficient and timely implementation of its relevant Environmental Assessment Reform process outcomes.

## 3.1 Introduction

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Continuous review and improvement are important in effectively managing programs to monitor water quality, particularly because these programs are long term and involve a range of agencies.

## 3.2 Conclusion

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The Department of Environment, Land, Water & Planning (DELWP), Melbourne Water (MW) and the Environment Protection Authority Victoria (EPA) are carrying out a wide range of reviews of and initiatives in water quality monitoring. Although it is too early to assess the impact of these, the effective implementation of their recommendations should address the range of issues identified by this audit and by DELWP's 2015 internal audit of its water quality monitoring programs.

The three agencies have worked collaboratively with each other throughout this audit. This led to the early agreement about the key problems and the development of a joint agency action plan to address the problems identified by this audit. These activities are encouraging and commendable, as they reflect a strong commitment to addressing the range of problems identified by this audit, and to improving the effectiveness and efficiency of long-term water quality monitoring programs.

Agencies need to maintain this momentum to ensure that they implement and deliver the joint agency action plan and all the recommendations from DELWP's internal audit and review process and from EPA's environmental assessment reform process.

## 3.3 Initiatives and reviews

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Strategic initiatives and reviews that took place, or are taking place as a result of this audit, include:

- DELWP's 2015 internal audit of its statewide water quality monitoring framework
- the establishment of a joint working party made up of representatives of MW, EPA and DELWP to explore the issues identified by this audit
- early development of a joint agency action plan to address the problems identified by this audit.

Key initiatives and reviews to improve water quality monitoring that have taken or are taking place outside this audit process include:

- EPA's 2014 Environmental Assessment Reform process
- the 2015 DELWP and EPA review of the *State Environment Protection Policy (Waters of Victoria)* (SEPP (WoV)) due for completion in 2017.

### 3.3.1 Key initiatives and reviews implemented as a result of this audit

#### DELWP's 2015 internal audit

In January 2015, to prepare for this audit, DELWP carried out an internal audit of its water quality monitoring programs. The scope of the internal audit was to assess:

- performance against government targets for reporting
- the management of the Regional Water Monitoring Partnerships (RWMP)
- stakeholder engagement with respect to water resource monitoring.

The audit did not include evaluating:

- DELWP's performance in meeting its roles and responsibilities under the *Water Act 1989*
- processes and controls with respect to water quality programs not managed by DELWP
- the completeness of water quality and quantity data collected.

The scope of the audit was limited to nine of the 10 catchment regions, and did not include an assessment of the long-term water quality programs in the Port Phillip and Western Port region undertaken by MW and EPA. It also did not look at DELWP's role within this region against its responsibilities under the *Water Act 1989*.

This audit identified that DELWP was not effectively meeting its responsibility for delivering and reporting comprehensive long-term resource assessments through complete and reliable data collation and analysis:

- It has no oversight of most MW and EPA long-term water quality monitoring in the Port Phillip and Western Port region.
- It does not include MW's data in its statewide water quality monitoring database.
- It has no formalised data-sharing arrangement with MW and EPA to include all monitoring information from the Port Phillip and Western Port region in long-term water resource assessment reports.

The gaps and inadequacies identified by DELWP's internal audit of statewide water quality monitoring programs are similar to those identified by this audit. These gaps and inadequacies include:

- the absence of clear objectives to inform water quality monitoring programs
- inadequate governance of water quality monitoring programs
- the lack of a documented framework to measure performance against the government's water resource targets and objectives
- the lack of a program-wide stakeholder engagement plan.

To address these matters, DELWP prepared a comprehensive action plan outlining a range of actions, including preparing:

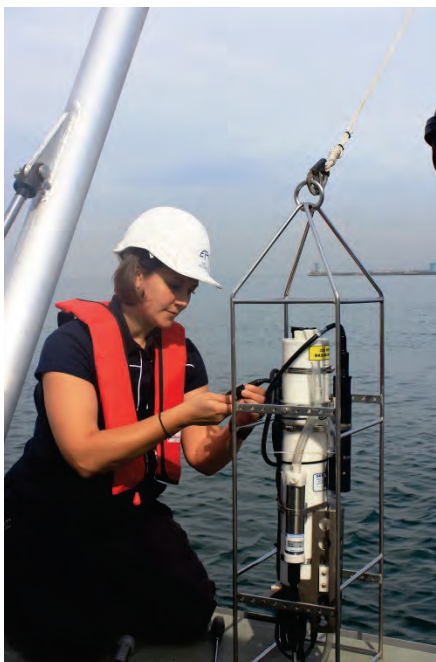
- a water quality and water quantity performance framework that sets out clear objectives, what water quality monitoring programs and data are required to meet these objectives and clear roles and responsibilities for its implementation and performance reporting
- a comprehensive assessment of its water monitoring sites and data sets to confirm that they are appropriate to the needs of policy and its key partners, such as water authorities, catchment management authorities and local authorities.
- an appropriate governance mechanism
- a stakeholder engagement plan.

DELWP has satisfactorily implemented all the above actions except for the development of a water quality and quantity performance framework. DELWP has put this action on hold until the outcomes of this audit and the review of SEPP (WoV) are known. As an interim measure, DELWP developed a template to report water quality parameters collected against SEPP (WoV) quantitative water quality objectives. Although this is an important first step in developing the framework, reporting compliance against the SEPP (WoV) quantitative water quality objectives alone is not enough to address this recommendation for two reasons:

- Government objectives for long-term water quality are broader than the SEPP (WoV) quantitative objectives and the performance framework must include both quantitative and qualitative objectives for any network of long-term water quality programs to be effective in meeting policy needs.
- The objectives contained in SEPP (WoV) are aspirational in nature for some areas, particularly in the urbanised areas of the Port Phillip and Western Port region. This means most of the objectives will need longer than the 10-year life of the policy to achieve, which makes reporting compliance with these objectives more difficult.

Independent reviews of long-term water quality monitoring have identified the following good practice objectives:

- working out long-term trends
- assessing compliance against current water quality objectives set to protect the uses of the waters that the community deem important
- assessing the impact of management actions and strategic initiatives
- identifying key stressors affecting waterways
- identifying high-risk priority hotspots for water quality
- identifying emerging water quality problems.



*Marine water quality monitoring.  
Photograph courtesy of EPA.*

To meet some of its internal audit recommendations, DELWP carried out a comprehensive scientific review of its Regional Water Management Partnerships program, which operates in nine of the 10 regional catchments. This review identified further recommendations to improve this program, which includes most of the physico-chemical monitoring programs in these catchments. The implementation of the recommendations arising from this review is on hold pending the outcomes of this audit and the review of SEPP (WoV). It is not clear how the implementation of these recommendations will be tracked and reported against. It is important that DELWP uses its audit and risk committee to apply the same scrutiny to these recommendations as it does to those arising from internal audits.

### Joint agency working party

During this audit, DELWP, EPA and MW formed a joint working group to ensure that they had a coordinated and collaborative engagement process. The joint working party held workshops over the course of this audit to:

- further explore, document and gain a shared understanding of the strategic policy framework for water quality monitoring and the issues associated with it
- further explore the problems associated with long-term water quality monitoring for the Port Phillip and Western Port region as identified by this audit
- lay the foundation and identify actions for further discussions that will improve coordination between agencies, clarity around roles and responsibilities, how programs work and reporting on long-term water quality
- help agencies to respond in a coordinated manner to the ongoing VAGO audit.

The outcome of this process was the early preparation of a draft action plan, which provides a good foundation to address the gaps and problems identified by this audit. The next step for the agencies is to further develop the plan by specifying resourcing and time frames for delivery, and ensuring that a formal process is in place to track and report on the implementation and performance of the actions in addressing the problems.

### 3.3.2 Key initiatives and reviews implemented outside the audit process

#### The Environment Protection Authority's environmental assessment reform

In late 2013, EPA reviewed its environmental assessment program and governance. After this review, it declared that the key aims of its environmental assessment programs, including water quality monitoring, should be to:

- assess current and emerging environmental risks
- investigate significant risks through monitoring, analysis and evaluation
- assess the success of EPA's regulatory or influencing actions
- set environmental quality objectives that protect human and ecosystem health
- assess current environmental quality (including baseline) and trends.

Key actions planned by EPA to achieve these for its water quality monitoring function include to:

- review, access and organise current EPA data, including improving public access
- engage with partners and design new water quality monitoring programs
- develop memorandums of understanding for sharing data with partners and other regulators
- implement a new governance structure for environmental assessment programs
- work with DELWP and the Office of the Commissioner for Environmental Sustainability Victoria to develop a broader government State of Environment reporting process.

EPA has begun working with the Office of the Commissioner for Environmental Sustainability on Victoria's State of Environment reporting process. As part of the marine environment assessment program reform, EPA has also begun work engaging with partners to review the program. The implementation of the other actions has been delayed because of the strategic review of EPA and its functions, which is due to be finalised in 2016.

The actions taken so far are positive and should improve EPA's management, evaluation and reporting of long-term water quality monitoring in both the Port Phillip and Western Port region and throughout the state. Depending on the outcomes of the current strategic review of EPA and its functions, EPA might need to review its implementation time frames and resourcing, to ensure that all actions identified in the reform process are completed efficiently and in a timely manner.

### *State Environment Protection Policy (Waters of Victoria) review*

SEPP (WoV) is the key policy underpinning water quality monitoring throughout the state. DELWP is leading the review of this policy in partnership with EPA, which is providing the scientific input. A panel and a range of committees have been set up to help guide the review, including:

- a stakeholder reference committee, composed of 10–12 members from key stakeholder groups and organisations
- a scientific advisory panel, composed of six scientists from CSIRO and universities, to provide independent advice and direction to EPA on the scientific components of the policy
- an internal review committee, with representatives from a range of government departments and agencies to ensure that policies are coordinated and consistent across portfolios.

The proposed aims of the review in relation to water quality monitoring include developing:

- water quality objectives that are in keeping with the latest science underpinning water management and reflect the changes to national guidelines
- achievable short-term targets that contribute to long-term statewide objectives
- an attainment program that results in improved implementation, accountability and reporting for water quality monitoring.

If achieved, these aims will address a range of problems associated with setting objectives for long-term monitoring of water quality, as outlined in Part 2. These problems currently impede effective water quality monitoring in the Port Phillip and Western Port region. In achieving these aims:

- short-term interim objectives will be set and be achievable for the region
- objectives will be set through a coordinated approach, improving their rigour and resulting in cross-agency buy-in
- there will be improved accountability for monitoring compliance against the objectives through formalised roles and responsibilities outlined in the policy's attainment program.

It will be vital to assess and evaluate the effectiveness of the SEPP (WoV) changes in addressing the gaps and inadequacies identified by both this audit, by DELWP's 2015 internal audit and by its subsequent review of its Regional Water Monitoring Partnerships program.

## **Recommendations**

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2. That the Department of Environment, Land, Water & Planning implements all actions from its internal audit, subsequent 2015 review and the joint agency action plan, where it is identified as the lead agency, and ensures that the relevant recommendations are tracked by and reported to its internal risk and audit committee.
  3. That the Environment Protection Authority Victoria reviews its implementation time frames and resourcing to ensure the efficient and timely implementation of its relevant Environmental Assessment Reform process outcomes, once the outcomes of Environment Protection Authority's Strategic Review are known.
-



# Appendix A.

## *Audit Act 1994* section 16— submissions and comments

### Introduction

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In accordance with section 16(3) of the *Audit Act 1994*, a copy of this report, or part of this report, was provided to the Department of Environment, Land, Water & Planning, Melbourne Water, the Environment Protection Authority Victoria and the Department of Premier & Cabinet throughout the course of the audit.

The submissions and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

The Department of Environment, Land, Water & Planning, Melbourne Water and Environment Protection Authority Victoria provided a joint agency action plan. The Environment Protection Authority Victoria also submitted a separate response identifying its individual roles and responsibilities within the joint agency action plan.

Responses were received as follows:

Department of Environment, Land, Water & Planning .....	30
Melbourne Water .....	32
Environment Protection Authority Victoria .....	33
Department of Premier & Cabinet .....	36

**RESPONSE provided by the Secretary, Department of Environment, Land, Water & Planning**



Department of Environment  
Land, Water & Planning

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Dr Peter Frost  
Acting Auditor-General  
Victorian Auditor-General's Office  
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MELBOURNE VIC 3000



Ref: SEC011973

Dear ~~Dr Frost~~ *Peter*

**PROPOSED PERFORMANCE AUDIT REPORT MONITORING VICTORIA'S WATER RESOURCES**

Thank you for the opportunity to respond to the proposed performance audit report on *Monitoring Victoria's Water Resources*.

The report identifies several issues with water quality monitoring in the Port Phillip and Westernport region, as well as actions which will improve the governance, coordination and oversight of water quality monitoring programs in the region.

I am pleased to confirm that the Department of Environment, Land, Water and Planning (DELWP) welcomes the report's findings and accepts all the recommendations.

DELWP, Melbourne Water (MW) and the Environment Protection Authority (EPA) have worked together to produce the enclosed joint agency action plan to implement the recommendations from the audit. DELWP, MW and EPA will continue to work together to deliver the plan.

The timing to implement each action has been carefully considered to account for other processes, which affect water quality monitoring, such as the current review of the *State Environment Protection Policy: Waters of Victoria*.

Work to implement some of these actions has already commenced and I am confident that the action plan will drive valuable improvements in water quality monitoring in Victoria.

Yours sincerely

Adam Fennessy  
Secretary

3 / 5 / 16.

Any personal information about you or a third party in your correspondence will be protected under the provisions of the Privacy and Data Protection Act 2014. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorized by law. Enquiries about access to information about you held by the Department should be directed to the Privacy Coordinator, Department of Environment, Land, Water and Planning, PO Box 500, East Melbourne, Victoria 8002.



**JOINT ACTION PLAN provided by the Department of Environment, Land, Water & Planning, Melbourne Water and the Environment Protection Authority**

VAGO PERFORMANCE AUDIT – MONITORING VICTORIA'S WATER RESOURCES – Agency (DELWP, Melbourne Water, EPA) Joint Agency Action Plan

**VAGO PERFORMANCE AUDIT – MONITORING VICTORIA'S WATER RESOURCES**

**Joint Agency Action Plan (Department of Environment, Land, Water and Planning (DELWP), Melbourne Water, Environment Protection Authority Victoria (EPA))**

Note – The term 'water quality monitoring' in this action plan refers to any program of long-term physico-chemical, bacteriological and biological water quality monitoring as per the definition in the scope of the VAGO audit. Overall, the collection of programs which are relevant in the region are referred to as the 'network', whether there are explicit links between the programs or not.

Note – The plan is currently just limited to the partner agencies in the VAGO audit. However, in implementing actions additional partners may be identified and involved.

VAGO recommendations	Agency Action Plan	Timeline
<p>1. That the Department of Environment, Land, Water &amp; Planning, in conjunction with Melbourne Water and the Environment Protection Authority Victoria, lead action to improve the governance of the network of long-term water quality programs across the Port Phillip and Western Port catchment region by:</p> <ul style="list-style-type: none"> <li>establishing a cross agency committee to coordinate and oversee long term water quality monitoring programs for the region</li> <li>developing an overarching monitoring, evaluation and reporting framework for long term water quality monitoring in the Port Phillip and Western Port region</li> <li>developing agreements that facilitate effective and efficient sharing of data</li> <li>reviewing quality assurance processes supporting data collection, collation and analysis to ensure consistency against better practice principles</li> <li>exploring the feasibility and options to develop a publicly accessible report card system that coordinates the publishing of all relevant physico-chemical, biological and recreational water quality monitoring results/analysis across the region</li> </ul>	<p>DELWP will implement appropriate systems and processes to improve the coordination, governance and oversight of the network of long term water quality programs across the Port Phillip and Westernport region. DELWP will:</p> <ul style="list-style-type: none"> <li>Clarify roles and responsibilities of each agency</li> <li>Implement and track progress on actions arising from this action plan and VAGO audit and any other relevant reviews</li> <li>Establish appropriate governance processes and systems to guide and inform program delivery, including the establishment of a cross agency committee to coordinate and oversee long term water quality monitoring programs for the region</li> <li>Develop an appropriate target of reporting tools to support active management, coordination and oversight of water quality monitoring programs in the Port Phillip and Westernport region</li> </ul> <p>DELWP, Melbourne Water and EPA will develop an overarching monitoring and evaluation framework for the Port Phillip and Westernport region that:</p> <ul style="list-style-type: none"> <li>Sets an explicit purpose and aims for water quality monitoring programs</li> <li>Highlights the strategic links between long-term water quality monitoring programs in the region and the government's key state policy priorities and objectives</li> <li>Clearly maps water quality monitoring programs and use of data for reporting in the region</li> <li>Clarifies roles and responsibilities for long-term monitoring programs and the reporting of data and outcomes</li> <li>Incorporates the regular review and evaluation of water quality monitoring programs against overarching purpose and program aims</li> </ul>	<p>September 2016</p> <p>June 2017</p>
<p>2. That the Department of Environment, Land, Water &amp; Planning implements all actions from its internal audit, subsequent 2015 review and the joint agency action plan, where it is identified as the lead agency, and ensures that the relevant recommendations are tracked by and reported to its internal risk and audit committee</p> <p>3. That the Environment Protection Authority reviews its implementation timelines and resourcing to ensure the efficient and timely implementation of its relevant Environmental Assessment Reform process outcomes once the outcomes of Environment Protection Authority's Strategic Review are known.</p>	<p>DELWP, Melbourne Water and EPA will develop an agreement that supports the formalisation and documentation of data collation, data flow and data use and includes standard protocols regarding data sharing, collection, use and accessibility.</p> <p>DELWP, Melbourne Water and EPA will review the quality systems and quality assurance programs supporting data collection, collation and analysis in order to develop:</p> <ul style="list-style-type: none"> <li>a set of core QA/QC principles for all programs</li> <li>consistent data management protocols that will improve data use, timeliness and accessibility.</li> </ul> <p>DELWP, Melbourne Water and EPA will develop an overarching monitoring, evaluation and reporting framework for long term water quality monitoring in the Port Phillip and Westernport region</p> <p>DELWP, Melbourne Water and EPA, within the broader agency reporting framework, will investigate expanding the Yarra and Bay Report Card, including to the Westernport region, taking into account the current and future work under State of the Bays, Catchment Condition and Management Report and State of the Environment.</p> <p>DELWP will implement the remaining action from its internal audit, actions from the subsequent 2015 review, and all DELWP led actions in this joint agency action plan. Progress against these actions will be reported to and tracked by the DELWP internal risk and audit committee</p> <p>EPA Victoria will review the deliverables and timelines for its Water Environmental Assessment Program pending the outcomes of the EPA inquiry</p>	<p>December 2016</p> <p>December 2016</p> <p>Post SEPP Review</p> <p>December 2016</p> <p>Linked to each action</p> <p>July 2017</p>



**RESPONSE provided by the Managing Director, Melbourne Water**

28 April 2016

Dr Peter Frost  
Acting Auditor General  
Victorian Auditor General's Office  
Level 24, 35 Collins Street  
MELBOURNE VIC 3000



Dear Dr Frost,

**Proposed Performance Audit Report: Monitoring Victoria's Water Resources**

Thank you for your letter of 20 April 2016 enclosing the proposed audit report on *Monitoring Victoria's Water Resources*. We welcome the opportunity to provide a formal submission on the proposed audit report.

Melbourne Water supports the findings and recommendations identified in this audit, and is supportive of a joint focus between Department of Environment, Land, Water and Planning (DELWP), EPA Victoria and Melbourne Water to improving governance, coordination, data management and reporting of water quality monitoring in the Port Phillip and Western Port region. As reflected in the report, Melbourne Water has been working closely and proactively with the EPA and DELWP throughout this audit, and the three agencies have jointly produced an Action Plan (Attachment 1) to address the recommendations.

Melbourne Water is committed to continuing to work closely with DELWP and the EPA to implement this Action Plan to address the audit recommendations. The monitoring of Melbourne Water's contribution to these actions will be overseen by Melbourne Water's Internal Audit function.

Melbourne Water would like to acknowledge the constructive approach to this audit from the team at Victorian Auditor General's office, and additionally, the collaborative approach taken between the three agencies in this audit (DELWP, EPA and Melbourne Water), which has positively acknowledged in the report.

If you require further information regarding the above or attached, please contact Hannah Pexton, Manager Catchment and Water Quality on (03) 9679 6671 or [Hannah.Pexton@melbournwater.com.au](mailto:Hannah.Pexton@melbournwater.com.au).

Regards,

A handwritten signature in blue ink, appearing to read 'Michael Wandmaker', written over a set of horizontal lines.

**Michael Wandmaker**  
Managing Director

CC. Hannah Pexton, Manager Catchment and Water Quality, Melbourne Water



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**RESPONSE provided by the Chief Executive Officer, Environment Protection Authority Victoria**

Our Ref: MA006881

Dr Peter Frost  
Acting Auditor-General  
Level 24, 35 Collins St  
MELBOURNE VIC 3000



Dear Dr Frost

**Proposed Performance Audit Report - Monitoring Victoria's Water Resources**

Thank you for your letter of 20 April 2016 enclosing the Proposed Performance Audit Report for Monitoring Victoria's Water Resources.

As noted in the report, understanding the status and long-term trends in the quality of water in Victoria's inland waterways and bays is important to maintain and protect the health of ecosystems and the well-being of Victorians who use the waterways and bays. EPA agrees that this includes the broader economic, social and environmental benefits that good water quality supports.

Environment Protection Authority Victoria (EPA) welcomes the report's findings and accepts the recommendations. The report makes three recommendations to improve monitoring of waterways in the Port Phillip and Westernport region, including two recommendations that relate to EPA's roles and responsibilities. EPA's actions in response to these recommendations are attached (Attachment 1). These actions form part of the joint Department of Environment, Land, Water and Planning (DELWP) Melbourne Water and EPA action plan (Attachment 2) acknowledged in the Proposed Performance Audit Report.

We note the report commended the collaborative work of EPA, DELWP and Melbourne Water in developing a joint agency action plan to drive change. We appreciate that the report acknowledges EPA as having better practice quality assurance systems, and better practice performance reporting for Beach Report, Yarra Watch and the Report Card on the Yarra and Bay website.

Completion of EPA actions addressing the recommendations will be monitored via EPA's Program Development and Management Methodology under EPA's Audit Management Framework.

Yours sincerely

NIAL FINEGAN  
CHIEF EXECUTIVE OFFICER  
ENVIRONMENT PROTECTION AUTHORITY VICTORIA

25/2016

**Environment Protection Authority Victoria**

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**RESPONSE provided by the Chief Executive Officer, Environment Protection Authority Victoria – continued**

**ATTACHMENT 1**  
**Table 1 - EPA responses to proposed report recommendations for which EPA has a role and responsibilities**

Number	Recommendation	Proposed Action	Completion Date
1	<p>That the Department of Environment, Land, Water &amp; Planning, in conjunction with Melbourne Water and the Environment Protection Authority Victoria, lead action to improve the governance of the network of long-term water quality programs across the Port Phillip and Western Port catchment region by:</p> <ul style="list-style-type: none"> <li>establishing a cross agency committee to coordinate and oversee long term water quality monitoring programs for the region</li> <li>developing an overarching monitoring, evaluation and reporting framework for long term water quality monitoring in the Port Phillip and Western Port region</li> <li>developing agreement/s that facilitate effective and efficient sharing of data</li> <li>reviewing quality assurance processes supporting data collection, collation and analysis to ensure consistency against better practice principles</li> <li>exploring the feasibility and options to develop a publically accessible</li> </ul>	<p>EPA will participate in the cross agency committee and governance arrangements being established by DELWP to improve coordination, governance and oversight of water quality monitoring programs in the Port Phillip &amp; Westernport region.</p> <p>EPA will work with the lead agency DELWP and Melbourne Water to develop an overarching monitoring and evaluation framework for the Port Phillip and Westernport region that:</p> <ul style="list-style-type: none"> <li>Sets an explicit purpose and aims for water quality monitoring programs.</li> <li>Highlights the strategic links between long-term water quality monitoring programs in the region and the government's key state policy priorities and objectives.</li> <li>Clearly maps water quality monitoring programs and use of data for reporting in the region.</li> <li>Clarifies roles and responsibilities for long-term monitoring programs and the reporting of data and outcomes.</li> <li>Incorporates the regular review and evaluation of water quality monitoring programs against overarching purpose and program aims.</li> </ul> <p>EPA will work with the lead agency DELWP and Melbourne Water to develop an agreement that supports the formalisation and documentation of data collation, data flow and data use and includes standard protocols regarding data sharing, collection, use and accessibility.</p> <p>EPA will work with the lead agency DELWP and Melbourne Water to review the quality systems and quality assurance programs supporting data collection, collation and analysis in order to develop:</p> <ul style="list-style-type: none"> <li>A set of core QA/QC principles for all programs.</li> <li>Consistent data management protocols that will improve data use, timeliness and accessibility.</li> </ul> <p>EPA will work with the lead agency DELWP and Melbourne Water to develop an overarching monitoring, evaluation and reporting framework for long term water quality monitoring in the Port Phillip and Westernport region.</p> <p>EPA will work with DELWP and Melbourne Water within the broader agency reporting framework to investigate expanding the Yarra and Bay Report Card, including to the Westernport region, taking into account the current and future work under State of the Bays, Catchment Condition and Management Report and State of the Environment.</p>	<p>September 2016</p> <p>June 2017</p> <p>December 2016</p> <p>December 2016</p> <p>Post SEPP Review</p> <p>December 2016</p>

**RESPONSE provided by the Chief Executive Officer, Environment Protection Authority Victoria – continued**

Number	Recommendation	Proposed Action	Completion Date
3	<p>report card system that coordinates the publishing of all relevant physical-chemical, biological and recreational water quality monitoring results/analysis across the region.</p> <p>That the Environment Protection Authority reviews its implementation timeframes and resourcing to ensure the efficient and timely implementation of its relevant Environmental Assessment Reform process outcomes once the outcomes of Environment Protection Authority's Strategic Review are known.</p>	<p>EPA Victoria will review the deliverables and timelines for its Water Environmental Assessment Program pending the outcomes of the EPA Inquiry.</p>	July 2017

**RESPONSE provided by the Secretary, Department of Premier & Cabinet**



Department of  
Premier and Cabinet

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B16/2091

Dr Peter Frost  
Acting Auditor-General  
Victorian Auditor-General's Office  
Level 24, 35 Collins Street  
MELBOURNE VIC 3000



Dear Dr Frost, *Peter*

Thank you for providing the proposed performance audit report *Monitoring Victoria's Water Resources* in accordance with section 16(3) of the *Audit Act 1994*.

I note that the audited agencies have the opportunity to respond to the proposed report.

Yours sincerely

  
Chris Eccles  
Secretary

29 APR 2016

**Unclassified**

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## Reports tabled during 2015–16

<b>Report title</b>	<b>Date tabled</b>
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Follow up of Managing Major Project (2015–16:2)	August 2015
Follow up of Management of Staff Occupational Health and Safety in Public Schools (2015–16:3)	August 2015
Biosecurity: Livestock (2015–16:4)	August 2015
Applying the High Value High Risk Process to Unsolicited Proposals (2015–16:5)	August 2015
Unconventional Gas: Managing Risks and Impacts (2015–16:6)	August 2015
Regional Growth Fund: Outcomes and Learnings (2015–16:7)	September 2015
Realising the Benefits of Smart Meters (2015–16:8)	September 2015
Delivering Services to Citizens and Consumers via Devices of Personal Choice: Phase 2 (2015–16:9)	October 2015
Financial Systems Controls Report: Information Technology 2014–15 (2015–16:10)	October 2015
Department of Education and Training: Strategic Planning (2015–16:11)	October 2015
Public Hospitals: 2014–15 Audit Snapshot (2015–16:12)	November 2015
Auditor General's Report on the Annual Financial Report of the State of Victoria, 2014–15 (2015–16:13)	November 2015
Local Government: 2014–15 Audit Snapshot (2015–16:14)	November 2015
Responses to Performance Audit Recommendations 2012–13 and 2013–14 (2015–16:15)	December 2015
East West Link Project (2015–16:16)	December 2015
Portfolio Departments and Associated Entities: 2014–15 Audit Snapshot (2015–16:17)	December 2015
Water Entities: 2014–15 Audit Snapshot (2015–16:18)	December 2015
Implementing the Gifts, Benefits and Hospitality Framework (2015–16:19)	December 2015
Access to Public Sector Information (2015–16:20)	December 2015
Administration of Parole (2015–16:21)	February 2016
Hospital Performance: Length of Stay (2015–16:22)	February 2016
Public Safety on Victoria's Train System (2015–16:23)	February 2016

Victorian Electoral Commission (2015–16:24)	February 2016
Grants to Non-Government Schools (2015–16:25)	March 2016
Digital Dashboard: Status Review of ICT Projects and Initiatives – Phase 2 (2015–16:26)	March 2016
Patient Safety in Victorian Public Hospitals (2015–16: 27)	March 2016
Bullying and Harassment in the Health Sector (2015–16:28)	March 2016
Local Government Service Delivery: Recreational Facilities (2015–16:29)	March 2016
Managing and Reporting on the Performance and Cost of Capital Projects (2015–16:30)	May 2016

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