

Annual report on drinking water quality in Victoria

1 July 2006 – 30 June 2007

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This document may also be downloaded from the following website:

www.health.vic.gov.au/environment/water/drinking

Foreword

Victoria's drinking water quality regulatory framework recognises the importance of safe drinking water to the ongoing social and economic wellbeing of Victorians. Water is necessary for life, and clean drinking water is necessary for maintaining public health. This has been brought into sharp focus by the ongoing drought conditions that much of Victoria has experienced during the past several years.

The drinking water regulatory framework is detailed in the *Safe Drinking Water Act 2003* (the Act) and the *Safe Drinking Water Regulations 2005* (the Regulations).

The Act and Regulations provide a comprehensive regulatory framework that encompasses a catchment-to-tap, risk-based approach to the management of drinking water quality across the state. The key objectives of this regulatory framework are to ensure:

- where water is supplied as drinking water it is safe to drink
- any water not intended to be drinking water cannot be mistaken for drinking water
- water quality information is disclosed to consumers and is open to public accountability.

This annual report has been prepared in accordance with section 32 of the Act, which requires the Secretary to the Department of Human Services to provide the Minister for Health with an annual report on drinking water quality in Victoria.

This annual report, the third produced under the Act, provides an overview of the operations and implementation of the Act and the performance of water businesses in regard to the 2006–07 reporting period (1 July 2006 to 30 June 2007). It summarises the performance of water businesses against the state's water quality standards, and provides information in relation to water quality incidents and events.

Copies of this report can be obtained from the Department of Human Services' Drinking Water Regulatory Section (1300 761 874), or downloaded from the website: www.health.vic.gov.au/environment/water/drinking

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Executive summary

Victoria's drinking water quality regulatory framework is based on the concept of continuous improvement. This concept is articulated through the risk management plans water businesses are required to prepare and implement for their drinking water supplies. This risk-based approach to the maintenance of drinking water quality instils a proactive, rather than reactive, management approach, where risks to drinking water quality are identified and managed.

During the third year of the operation of the *Safe Drinking Water Act 2003* (the Act) ongoing drought and the alpine bushfires were the dominant issues. At the other extreme, in the last days of the reporting period, a severe rainfall event occurred over most of Gippsland, bringing floodwaters to many communities and creating water quality issues in the Yarra Valley. In the face of these very challenging circumstances, the majority of Victorians who were supplied with drinking water by the state's water businesses continued to have access to safe drinking water.

Areas of ongoing non-compliance with the state's water quality standards still exist in some parts of regional Victoria. There were signs of improvement, as more water sampling localities were compliant with the water quality standards compared to the previous two reporting periods. This was achieved in spite of the ongoing drought.

Where non-compliances were identified, the Department of Human Services continued to work with the affected

water businesses to put in place undertakings that establish agreed courses of action to resolve issues of non-compliance and to protect public health. By the end of the reporting period many of the undertakings had been completed and improvements in water quality were evident.

For the first time in the three reporting periods a water sampling locality in metropolitan Melbourne was found to be non-compliant with a water quality standard. Two *Escherichia coli* (*E. coli*) detections occurred in the Seville water sampling locality. Extensive additional testing by Yarra Valley Water was able to demonstrate that drinking water remained safe despite these two unrelated detections.

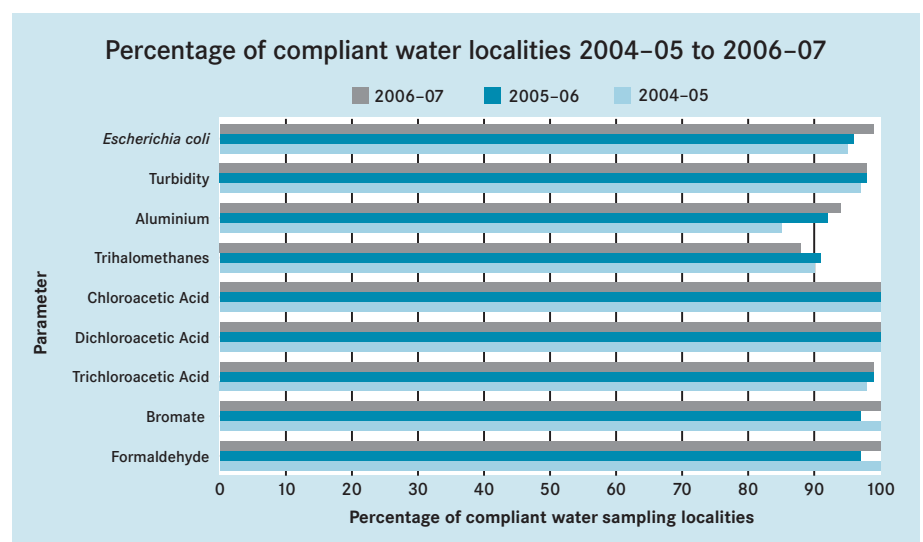
There were 195 water quality incidents and events reported to the department by water suppliers during 2006–07, however none of the reported incidents resulted in notifications of confirmed

associated illness. The reported incidents and events were generally minor in nature and principally consisted of the sporadic detection of *E. coli* bacteria, blue-green algal blooms or temporary failures of disinfection equipment.

During the 2006–07 reporting period the vast majority of Victorians had access to compliant drinking water. With the exception of trihalomethanes, the percentage of water sampling localities compliant with each of the water quality standards remained the same or improved from the 2005–06 reporting period.

Across Victoria, compliance with the *E. coli* water quality standard improved from 95.5 per cent to 99 per cent of localities, and compliance with the turbidity standard remained at 98 per cent of localities.

Given the ongoing drought and low flow conditions experienced during



the reporting period, the state's water businesses performed exceptionally well, delivering microbiologically safe drinking water to an increased number of Victorians.

These results indicate the regulatory framework continues to deliver water quality improvements for Victoria.

Compliance with the trihalomethanes water quality standard fell from 91.5 per cent of localities during 2005–06 to 88.5 per cent during 2006–07. This reflected the challenges faced by some water businesses as they manage low water levels in their storages. Affected water businesses are working with the department to implement permanent solutions to the excess production of trihalomethanes. There are also innovative solutions being trialled, primarily involving aeration, which may reduce trihalomethanes to acceptable levels in the short-term.

During the reporting period water supplied to 46 townships was declared by the Minister for Health as regulated water, that is, water that is not drinking water but could reasonably be mistaken as drinking water. The water in all but two of these townships has always been identified as non drinking water. In the case of the other two towns the drinking water contained unacceptably high levels of naturally-occurring arsenic.

In addition to protecting public health, regulated water declarations are a mechanism to include these non-drinking water supplies within the state's regulatory framework. The long term

goal of the department is to work with water businesses and other government agencies to have all regulated water supplies upgraded to a drinking water standard.

Several severe blue-green algal blooms occurred during the reporting period, two of which required the direct involvement of the department in the management of public health risks.

Based on reporting patterns to the department, the length and severity of blue-green algal blooms is on the increase. This can be linked to both the ongoing drought and climate change, which produce conditions that are conducive for the growth of blue-green algae. It is expected that

the management of such blooms will become more difficult if water storage levels do not improve.

As several knowledge gaps still exist with regard to the efficacy of treatment processes to remove toxins, and the time involved to conduct toxin testing on algal blooms, a conservative management approach to potentially toxic blue-green algal blooms will continue to be adopted to ensure the protection of public health.

A review of non-compliant water sampling localities over the past three reporting periods showed that it is largely the same water supplies or water supply areas that are recording non-compliances with the water quality

Highlights of the 2006–07 reporting period:

- All but one water sampling locality across the Melbourne metropolitan area achieved 100 per cent compliance with the state's water quality standards.
- Ninety-nine per cent (99 per cent) of all water sampling localities across Victoria complied with the *E. coli* standard.
- There was a greater level of overall compliance with most water quality standards compared to 2005–06. The biggest improvement was compliance with the aluminium standard, which improved from 91 per cent to 94 per cent. This occurred despite the low flow conditions experienced across the state, which in some circumstances adversely affected raw water quality.
- The competency-based auditor certification scheme that was developed to support the risk management plan audit process commenced, and by the end of the reporting period there were four certified auditors attached to the scheme.
- None of the 195 reported water quality incidents or events resulted in notifications of confirmed associated illness.
- The vast majority of the state's water sampling localities were published in the Government Gazette by the end of the reporting period.

standards. This indicates that ongoing poor drinking water quality is largely confined to a small number of known areas. This also indicates that a number of Victorians have ongoing access to sub-optimal drinking water supplies.

There is a strong link between health inequality and access to safe drinking water. Health inequality in Victoria is a major issue to be addressed. The provision of safe drinking water is seen as important to achieving this outcome. The department looks forward to working with the Victorian water industry, other government agencies and relevant stakeholders to meet this challenge.

Identified areas for further improvement during the 2007–08 reporting period:

- Seven water sampling localities were still non-compliant with the *E. coli* water quality standard, with three of these being non-compliant in both the current and previous reporting periods. Twenty-two localities were non-compliant with this standard in 2005–06.
- Commissioning of risk management plan audits to verify that water businesses are meeting their regulatory obligations with respect to risk management.
- Priority areas for future undertakings are water sampling localities in the west and northwest of the state, which have been impacted heavily by the drought. The department is working with affected water businesses to address these issues.