



**Environment and Public Health
Quarterly Report - October to December 2000**

Annual reports of Melbourne Water's public health and environmental performance are published each year.

Also available is the *Environment & Public Health 2000*, which describes improvement plans for the city's water management and demonstrates how Melbourne Water will be accountable for this work.

Environment & Public Health 2000 is available via this Internet site.

Environment

Quarter Two: 1 October to 31 December 2000

1. Water

Environmental flows

During the quarter, all environmental flow requirements were achieved. The minimum flow in the Yarra River at Warrandyte was 360 megalitres a day. Melbourne Water is required to provide for a flow of no less than 245 megalitres a day downstream of the Yering Gorge diversion.

Key incidents and issues

On 10 October 2000, about 11 kilolitres of chlorinated water spilled into Olinda Creek as a result of a pipe failure at the Silvan-Olinda chlorination plant. Samples of water quality indicated no adverse impact on the biology of the creek.

2. Sewerage

During the quarter, Melbourne Water achieved 100 per cent compliance with effluent discharge parameters at Western Treatment Plant and Eastern Treatment Plant.

Seven odour complaints were recorded. Five related to the wastewater transfer system, and two to Eastern Treatment Plant. All were followed up.

Litter incident

EPA Victoria is investigating a community complaint regarding litter found on St Andrews Beach on 6 November.

In response, Melbourne Water cleaned the beach and established an incident team, which put in place a range of initiatives. These included investigating litter collection and other processes at Eastern Treatment Plant, including the outfall pipeline leading to the discharge point at Boags Rocks, and inspecting St Andrews and Gunnamatta beaches near Boags Rocks and access points along the pipeline.

Melbourne Water also developed a community awareness campaign aimed at reducing the amount of personal hygiene items disposed of into the sewerage system.

Sewage spills

Two spills were recorded on 23 October 2000 during a severe storm assessed to be about a one in four-year event. One spill of 10 megalitres was from the Merri Creek Main Sewer, which discharges to the Merri Creek, and the other of 2.7 megalitres was on the Maribyrnong River Main Sewer, which discharges to the Maribyrnong River.

A strategy is being developed to reduce spills from the Merri Creek Sewer and design and scoping investigations into the capacity of the Maribyrnong River Main will be carried out in 2001/2002. Strategies are developed to reduce spills for the least community cost and works priorities are based on sites with the most significant spills.

Effluent delivery system

Western Treatment Plant's effluent delivery system was commissioned in December 2000 and irrigation trials using recycled water began.

3. Waterways

Key incidents and issues

On 26 November 2000, a contractor working on a Melbourne Water drainage pipe in Carrum Downs recorded a high level of hydrogen sulphide gas coming from the pipe. Inspection revealed a large volume of decaying vegetable matter in the pipe. EPA Victoria was informed of the incident and traced the source to an illegal connection from a vegetable processing plant.

The first meeting of the Victorian Stormwater Advisory Committee took place on 11 October 2000. The Minister for Environment and Conservation established this committee to guide the Victorian Stormwater Action Program and allocate \$22.5 million of State Government funding.

Waterway management

Two community planting days were held during the quarter. These are cooperative activities between Melbourne Water, community groups, local businesses and councils. Areas planted were the Monbulk Creek Retarding Basin and the newly constructed Hampton Park wetlands. Melbourne Water also planted more than 1000 plants at Truganina Swamp, Altona, and 500 plants in Back Creek, Glen Iris.

Milestones

Melbourne Water convened the first meeting of the Diversions Management Advisory Committee on 24 October 2000. The committee aims to assist and advise on diversion management. Stakeholders include key agricultural associations, Department of Natural Resources and Environment, Port Phillip Catchment and Land Protection Board and the Victorian Farmers Federation.

Waterway water quality

During the quarter, waterways within Greater Melbourne generally had good levels of dissolved oxygen, pH and metals. Suspended solids and *E. coli* levels were mostly fair, whereas nutrients and turbidity were poor. Compared with the previous quarter, dissolved oxygen tended to be slightly lower, particularly in Werribee and Western Port streams. This decline in dissolved oxygen may be related to higher water temperatures, lower base flows and instances of algal blooms.

The poor pH result for the Yarra Rural area is uncommon and represents a small decrease below State environment protection policy objectives. Elevated nutrients are due to urban and agricultural pressures such as sewage treatment plant discharges, use of fertilisers, unsewered areas with septic tanks and stock waste.

During the quarter, 118 alert level exceedances were reported to EPA Victoria, or about 3 per cent of the total number of water quality measurements. Three sites recorded seven or more alerts, with 12 in Watsons Creek at Somerville (nutrients, water clarity, conductivity and copper), eight in Stony Creek at Yarraville (nutrients, dissolved oxygen, *E. coli*) and seven in Merri Creek at Craigieburn (nutrients, water clarity, *E. coli* and chromium).

Public Health

Quarter Two: 1 October to 31 December 2000

During the quarter, Melbourne Water complied with its statutory obligations in all areas and achieved its corporate public health targets for disinfection plant reliability and drinking water supplied to the retail water companies.

1. Water

Certification of Water Quality Management System

Melbourne Water's management system for the treatment and supply of drinking water has been audited and formally certified to the international Standard ISO9001 by Lloyds Register Quality Assurance.

Compliance summary

Statutory obligations under the Health (Fluoridation) Act (1973) in relation to fluoridation of water supplies were met.

Corporate targets for faecal and total coliforms were met at the entry points to the supply system and at water quality monitoring points.

No notifiable pathogens were detected in the routine monitoring program for Melbourne Water's water supply system. However, in November, a low level of *Cryptosporidium* was detected in a raw water sample from the Maroondah Aqueduct at Yarra Glen. All protocols were followed and resampling proved negative.

2. Sewerage

Monitoring and reporting for *E.coli* at discharge points and foreshore locations relating to the Eastern and Western Treatment Plants were conducted in accordance with statutory requirements and in all cases EPA Victoria licence limits for compliance were achieved or on target for annual compliance.

3. Waterways

Algal bloom

During the quarter, a blue-green algal bloom occurred in Lake Legana, Patterson Lakes.

Warning signs were placed around the lake advising that contact with the water may cause health problems and notices explaining Melbourne Water's response to the bloom were distributed to residents.

Actions to improve water quality and reduce the probability of blooms have continued. Aquatic plants were planted and further carp removed from the lake in December. Water quality in the adjacent Lakes Carramar and Illawong has greatly improved since last summer.

Waterway water quality

During the quarter, *E.coli* was monitored at 72 sites. During the quarter, nine of the 10 key sites had low *E.coli* levels relative to their State environment protection policy objectives. The one "exceeding" site, based on six samples over three months, was the Yarra River at Chandler Highway (Kew).

In some cases, elevated *E.coli* is associated with rain during or immediately before sampling. In these instances there is an increased likelihood of contamination from stormwater and sewer spills. Other cases of elevated *E.coli*, not associated with rainfall, may include faecal sources such as sewer leaks, septic tank effluent, illegal sewerage connections and stock defecating directly to waterways.

4. Corporate

EPA's 2000/01 Port Phillip Bay Beach Report Program began on 1 December 2000. In December, unacceptable levels of *E.coli* were detected at six beaches, with Werribee South being unacceptable twice. However, resampling showed that all had returned to acceptable levels by the next day and EPA Victoria made no recommendations to local councils against swimming at bayside beaches.