



**Environment and Public Health
Quarterly Report - July to September 2000**

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

Also available is a *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 One: 1 July to 30 September 2000

1. Water

Environmental flows – Yarra River

The minimum flow in the Yarra River at Warrandyte during the quarter was 301 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.

Thomson River

Melbourne Water is required to release water from Thomson Reservoir to satisfy minimum passing flow requirements in the Thomson River at the dam, the Narrows and Coopers Creek.

A flow of 216 megalitres a day is specified for the Coopers Creek site in July. Coopers Creek is about 25 kilometres downstream of the dam and these releases take about 12 hours to arrive. The minimum flow on one day was 202 megalitres a day due to difficulties in estimating the timing of releases. The average daily flow at Coopers Creek for the month was 250 megalitres a day.

Key incidents and Issues

A small spill of alum sludge occurred at Winneke Treatment Plant on 13 September 2000. The spill was caused by a blockage in a waste pipeline, which led to a manhole rupturing and about nine cubic metres of sludge spilling to the drainage system and flowing into Sugarloaf Creek. Water quality tests indicated no detrimental impact to the environment.

2. Sewerage

During the quarter, Melbourne Water achieved 100 per cent compliance with effluent discharge parameters at Western Treatment Plant and Eastern Treatment Plant and there were no sewage spills.

Eleven odour complaints were recorded during the quarter. Nine related to the wastewater transfer system, one to Eastern Treatment Plant and one to

Western Treatment Plant. All were followed up.

Key incidents and Issues

A draft report on a recommended receiving water monitoring program at Boags Rocks was submitted to EPA Victoria in August 2000.

EPA Victoria granted an extension in Melbourne Water's Eastern Treatment Plant discharge licence to continue accepting abattoir waste from a company until 30 September 2001.

EPA Victoria approved Melbourne Water's application for an Accredited Licence for Western Treatment Plant. The Accredited Licence, effective from October 2000, is less prescriptive than traditional licences and recognises Melbourne Water's record of environmental performance and improvement initiatives in place or being proposed for the plant.

In July 2000, Melbourne Water received audit reports on two reuse schemes using recycled water from Eastern Treatment Plant. A program has been developed to audit all effluent reuse schemes by 30 June 2001.

A new effluent reuse scheme for a nursery was commissioned during the quarter. This scheme will probably use about 20 megalitres of effluent a year.

At Western Treatment Plant, an effluent reuse channel is being commissioned to allow for effluent to be reused there.

3. Waterways and Drainage

Key incidents and Issues

An oil spill occurred in Blind Creek, Wantirna in July 2000. The source of the oil could not be identified. Some 29,000 litres of contaminated water, containing about 5000 litres of oil, was pumped from the creek.

A large amount of polystyrene was washed into Moonee Ponds Creek, Essendon from a building site in August 2000. EPA Victoria fined the offender and enforced clean-up activities.

Waterway management

During the quarter, earthworks were completed for four Healthy Bay wetlands at Troups Creek south of Centre Road, Eumemmerring Creek west of Hallam-Belgrave Rd,

Hampton Park East Drain east of Hallam Road and Dandenong Creek south of Heatherton Road. Planting of wetland species at these sites is scheduled for spring 2000.

During September 2000, revegetation works were undertaken along the Plenty River in Greensborough and Mernda, at several sites on the Yarra River in Kew, on Koonung Creek in Box Hill and along Broad Gully Road, Fuller Road and Bailey Road Drains in Mt Evelyn.

Environment awards

Melbourne Water was a finalist in the Living Cities Award for Urban Environmental Leadership category of the inaugural Prime Minister's Environment Award announced on World Environment Day. The submission showcased Melbourne Water's stormwater and waterway management programs as well as the Western Treatment Plant and Port Phillip Bay Study.

Melbourne Water was also a finalist in this year's Riverprize, awarded by the International River Symposium.

Water quality and stream health

Carp populations were reduced in the Quiet Lakes, Patterson Lakes, to manage blue-green algal blooms. Carp contribute to blooms by eating water plants in the lakes. Water plants will be re-introduced this spring.

Community participation

Melbourne Water hosted the first National Conference on Water Sensitive Urban Design during the quarter.

Milestones

Under an agreement signed during the quarter by Parks Victoria and Melbourne Water, Melbourne Water will be fully responsible for the environmental, bed and banks and hydraulic aspects of the Lower Yarra and Maribyrnong rivers. Parks Victoria will focus on managing litter, recreational use of the rivers and associated public landing and berthing facilities.

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 improve. This reflects a general increase in streamflows and

lower water temperatures. Increased water turbidity during the quarter is also likely to be related to increased flows.

A poor pH result for the Yarra Rural area is uncommon and represents a small decrease below the 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, Melbourne Water reported a total of 124 alert level exceedances to EPA Victoria, or about 2.6 per cent of the total number of water quality measurements. Four sites recorded seven or more alerts, with 10 in Stony Creek at Yarraville (nutrients, *E. coli*, zinc), eight in Brushy Creek at Wonga Park (nutrients), seven in Mile Creek at Keysborough (nutrients, *E. coli*, zinc) and seven in Ruffey Creek at Templestowe (nutrients, water clarity, *E. coli*, zinc).

Public Health

Quarter One: 1 July – 30 September 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

Water treatment alliance

During the quarter, Melbourne Water received a certificate of recognition for its participation in the Australian Water Association's Water Treatment Alliance – a pilot study for the introduction of a national voluntary program to ensure operational excellence at drinking water treatment plants.

Compliance summary

During the quarter, statutory obligations under the Health (Fluoridation) Act (1973) in relation to fluoridation of water supplies were met.

Corporate targets were met for faecal and total coliforms 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 August, a low level of *Giardia* was detected in a raw water sample at Cardinia Reservoir. All protocols were followed and resampling proved negative.

2. Sewerage

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

3. Waterways

Control of algal blooms

Blooms of blue-green algae in the Quiet Lakes at Patterson Lakes cleared in late July 2000. Warning signs that were in place for more than six months have been removed.

Waterway water quality

During the quarter, *E.coli* was monitored at 72 sites. Seven of nine key sites had low *E.coli* levels relative to State environment protection policy objectives. The two “exceeding” sites, based on three samples over three months, were the Yarra River at Spadonis Reserve (Coldstream) and 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

The World Health Organisation has issued draft *Guidelines for Safe Recreational-water Environments: Coastal and Fresh-waters* for public comment. Melbourne Water is working on behalf of the Water Services Association of Australia to review the guidelines and associated protocols.

The National Health and Medical Research Council and Agricultural and Resource Management Council of Australia and New Zealand Drinking Water Review Coordinating Group has been re-established for a further three years to review the *Australian Drinking Water Guidelines 1996*. Melbourne Water’s Science and Technology Manager has been re-appointed as the ARMCANZ representative.

Melbourne Water produced its first environment and public health improvement plan during the quarter. The publication, *Environment & Public Health 2000*, outlines objectives, priorities and measures for improving performance in environment and public health.