

# THE SOURCE

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Melbourne Water is a statutory authority owned by the State Government. Melbourne Water manages the water supply catchments, removes and treats most of Melbourne's sewage, and manages waterways and major drainage systems. The retail water companies provide water and sewerage services to consumers.

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NEW LIFE FOR RETIRED RESERVOIR

- 4 **Health check**  
Guidelines assess risks for bathers
- 6 **Back to nature**  
Conservation the key to Peninsula plan
- 8 **Reservoir of ideas**  
What the community wants for Devilbend



- 10 **Under pressure**  
Don Blackmore lands some stark messages



- 12 **Zoo logical**  
An organisation with three bottom lines

- 14 **Water worrier**  
Campaigner who makes the community link

- 15 **Last word**  
Slugs haunt waterways  
Facelift for Yan Yean  
Taking new shape

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## An opportunity to shape our water future

Community views are being sought on the future of Melbourne's water resources following the launch of a scene-setting report this month.

The report, known as a Discussion Starter, marks the beginning of the consultation phase of the State Government's Water Resources Strategy for Melbourne. The strategy aims to provide a long-term framework for the direction and management of Melbourne's water resources.

The 80-page report, accompanied by a summary brochure and multi-lingual pamphlet, was launched by the Chair of the Water Resources Strategy Committee, Emeritus Professor Nancy Millis.

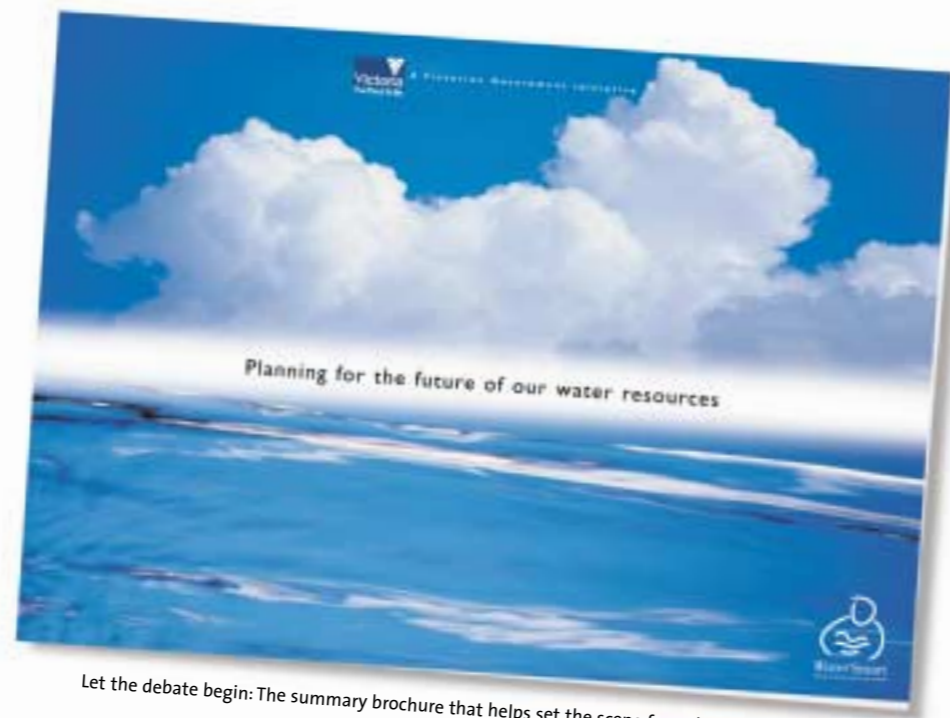
The report said that the traditional reaction to drought had been to build new dams. It was now timely for the community to review how to better adapt to the Australian climate and consider different responses.

The Minister for Environment and Conservation, Ms Sherryl Garbutt, who also spoke at the launch, said: "There is no immediate crisis, but the recent drought has certainly highlighted the need to establish a long-term management plan for our precious supplies.

"Melburnians seem ready to embrace a smarter, more sustainable future for our water supply."

The Discussion Starter listed four broad options to secure the future of Melbourne's water resources:

- Change behaviour to reduce demand.



Let the debate begin: The summary brochure that helps set the scene for public consultation

- Increase the use of recycled water.
- Squeeze more out of the existing supply.
- Develop "new" sources of water.

The report, which said the best strategy might include a mix of all four options, listed a variety of possible initiatives, all of which would have financial and other implications.

The Discussion Starter calls for public submissions, which are due by 24 August 2001. This will be followed by a Strategy Options Report, which will also be released for public comment.

The Water Resources Strategy Committee will present its final report to the Minister in the middle of next year.

Submissions can be sent via the WaterSmart website (see address below) or to:

Water Resources Strategy Committee  
Locked Bag 4280  
East Richmond Victoria 3121

For further information or your copy of the Discussion Starter, brochure or multi-lingual pamphlet, call 136 186, or visit the WaterSmart website at: [www.watersmart.vic.gov.au](http://www.watersmart.vic.gov.au)

## Water-sensitive design a winner

Melbourne Water's commitment to innovative stormwater treatment and drainage systems at new and existing subdivisions has helped the Cooperative Research Centre for Catchment Hydrology share a national award.

The award was largely based on the CRC's work with Melbourne Water and the Urban Land Corporation in promoting and communicating water-sensitive urban design principles at Lynbrook Estate (see *The Source*, Issue 8, June 2000).

The drainage system developed at Lynbrook includes gravel-filled, vegetated channels and constructed wetlands that absorb and filter stormwater, reducing runoff into waterways and bays.

The CRC for Catchment Hydrology was one of three award winners at the Cooperative Research Centres' Association conference in Perth last month. The awards recognised how effectively the results of research projects were communicated to industry.

# Blueprint for green sites



At home with nature: Local resident Judith Lesley enjoys a peaceful stroll at Old Joes Creek Retarding Basin

A future directions plan completed recently for Old Joes Creek Retarding Basin in Boronia is one of a series for Melbourne Water-owned sites of environmental significance.

The 4.5-hectare Old Joes Creek Retarding Basin provides habitat for the rare swordgrass brown butterfly, abundant birdlife and some native mammals, including possums and bats.

The site has been classified as regionally significant because it contains large stands of native vegetation, including four rare plant species.

Old Joes Creek is piped from the Dandenong Ranges through the urban catchment to the retarding basin, where it flows above ground for about 400 metres. It then re-enters a piped system before joining Dandenong Creek.

The future directions plan provides a blueprint for the management of the site over the next 10 to 15 years.

The plan, compiled by Melbourne Water, with assistance from Knox City Council, the local community,

landscape architects and stream and vegetation experts, took eight months to complete and followed two community meetings.

Among the main concerns at the site are litter flowing into the creek, mainly from shopping centres in the catchment, and dieback of

## Most encouraging was the interest and input of a passionate local community

trees caused by drought, urban development and the dominant bell miners. Other problems include rubbish dumping, dogs off leads and illegal access by motorbikes.

A key feature of the plan is the creation of a wetland to improve water quality, attract water birds and increase storage capacity to manage floods. Rock weirs are to be established to trap litter, attract habitat and improve water quality.

New canopy trees, especially messmate, and understorey vegetation will be planted to attract birds other than bell

miners. Other revegetation works will replace weeds, which include pittosporum, boneseed, ivy and blackberry.

Melbourne Water's Greg Bain said the most encouraging aspect of the plan was the interest and input of a passionate local community,

for whom the area is a peaceful, natural reserve.

The other sites of environmental significance for which future directions plans have been completed are Cherry Lake and Truganina Swamp in Altona, Cardinia Creek Retarding Basin in Beaconsfield, Monbulk Creek Retarding Basin in Belgrave Heights and Galada Tamboore in Campbellfield. Conservation management plans have been developed for the Edithvale and Seaford wetlands.

## The three pillars that underpin the business

Organisations are increasingly recognising the need to meet social, environmental as well as financial obligations in their decision-making, according to the Managing Director of Melbourne Water, Brian Bayley.

Mr Bayley said it was essential that Melbourne Water gave equal weight to all these obligations – the so-called triple bottom line.

His comments follow a decision to commission a regular, independent review of Melbourne Water's performance on social responsibility, including community consultation.

The "peer review", likely to be introduced by the end of this year, would make assessments and recommendations from which Melbourne Water would develop action plans to improve its performance where necessary.

Mr Bayley said it was exciting and challenging working in an environment in which the organisation got the debate going by creating strong links with the outside world and gained reliable feedback from a range of external sources.

"We know we're not the font of all knowledge," he said. "We have highly qualified and dedicated people working for us, such as engineers, chemists and accountants, but they represent a very small segment of the community.

"We understand how important it is to seek the best available scientific advice, but that must line up with the values of the community. That's why we involve the community in all our decision-making. We don't make decisions in a vacuum."

For example, a range of stakeholders had provided input for the organisation's strategic planning and a survey jointly conducted with the Australian Conservation Foundation had revealed the views of young people about the environment.

This was important because the current Melbourne Water team had inherited a first-rate water supply and sewerage system and was merely the custodian for the next generation.



Brian Bayley

"We're here for the short term and these resources are certainly not ours to reap cash from," he said. "Our primary objective is to manage these immensely valuable community assets for future generations."

- Tuning into a trio of bottom lines: Page 12-13



Fun in the sun: A young boy enjoys a splash at Rye ocean beach

# Guiding

# principles

New international guidelines for recreational waters could help us decide where we go swimming.

New World Health Organisation guidelines for recreational waters could change the way we rate our beaches.

The draft guidelines, which are due to be finalised late this year or early next year, assess the health risk of recreational water quality – and could lead to more informed choice for bathers.

The Coordinator of the World Health Organisation's Water, Sanitation and Health Program, Dr Jamie Bartram, said the guidelines would help many countries and individuals bring

together and interpret available evidence, and would assist moves towards international harmonisation and comparability.

This would improve the basis for personal choice among international as well as domestic travellers and tourists.

A former Executive Director of Public Health for Western Australia, Dr Richard Lugg, said the guidelines were likely to be picked up in Australia by 2003.

Dr Lugg, a public health physician, attended a meeting of experts at

Farnham, England, just before Easter this year to continue developing the guidelines.

He has for four years been part of an informal advisory group to the National Health and Medical Research Council on the introduction of Australian guidelines based on the World Health Organisation model.

Melbourne Water's Project Manager for Water Environment Research, Graham Rooney, said *E.coli* had been the indicator of choice for many years, but the experts believed that *enterococci* was now preferred.

"*Enterococci* has a far closer relationship with bather illness in marine waters than other indicators," he said.

would begin sanitation survey work at beaches around Melbourne later this year, in line with the recommended World Health Organisation approach. This work would assess infrastructure such as the number and condition of drains, as well as dispersal of stormwater and the receiving environment.

"We can put all these studies together in Port Phillip Bay," he said. "It is an ideal national demonstration project."

*A microbiological study of the waters around Boags Rocks began in February last year. Melbourne Water's Eastern Treatment Plant at Carrum discharges treated effluent into Bass Strait at Boags Rocks, near Cape Schanck, via a 56-kilometre pipeline.*

*The study, carried out by the Department of Epidemiology and Preventive Medicine at Monash University, examined whether enterococci levels were within draft World Health Organisation guidelines for recreational waters. A report is expected to be issued next month.*

## 'Beach Report will be completely revamped in the next few years, but we are already ahead of the game with our approach to communicating health risks'

Under the draft guidelines, bacteriological measurements for *enterococci* will be complemented by a rating of the susceptibility of the water to faecal pollution, based on site-specific public health hazards such as sewage outfalls, stormwater discharges, bather density and boating and shipping.

"We will end up with a rating – very good, good, fair, poor or very poor – for those waters," Dr Lugg said.

Dr Lugg said scientific evidence now showed that *enterococci* – round-shaped bacteria adapted to the gut of warm-blooded animals – were a better indicator organism in seawater than *E.coli* because they more closely mirrored the survival pattern of most pathogens of human faecal origin.

This was because they were able to survive longer in seawater than *E.coli*. However, very little difference could be detected between the performance of *enterococci* and *E.coli* near the discharge point.

"*E.coli* is not the preferred indicator any more, but it is not hopeless by any means," he said.

Andy Steven, the Environment Protection Authority's Manager of Marine Sciences, said a collaborative study comparing *E.coli* and *enterococci* and how they survive in seawater was due to be undertaken in Melbourne.

He endorsed the risk-based approach of the World Health Organisation guidelines, and said that EPA Victoria had moved beyond simply expressing health risk at beaches in terms of *E.coli* measurements with its 1999 publication, *Is it safe to go to the beach today?*

This had brought together six years' monitoring figures, rainfall data and understanding of local sewerage and drainage infrastructure to outline health risks at each beach.

"Our Beach Report is all about informing the public of the risks of swimming at Bay beaches," he said. "Beach Report will be completely revamped in the next few years, but we are already ahead of the game with our approach to communicating health risks."

Dr Steven said EPA Victoria, Melbourne Water and local councils

In addition, EPA Victoria would continue studies into the most appropriate indicators of human health risks in recreational waters, and was planning a research project in Port Phillip Bay based on a risk framework.

## How the EPA assesses Bay beaches

Beach Report is a summer program undertaken by the Environment Protection Authority that provides the latest information on water quality and beach conditions.

From the beginning of December until the end of March, EPA Victoria monitors for the indicator organism *Escherichia coli* (*E.coli*) in water near the shore at 36 Port Phillip Bay beaches.

This bacterial species is generally harmless to humans, but gives a reasonably good indication of levels of more harmful bacteria and viruses that may be present.

Monitoring is carried out more frequently from Christmas until the end of January, in line with an increased number of bathers and greater beach use.

In the event of *E.coli* exceeding acceptable levels at a particular beach, EPA Victoria advises against swimming at that beach.

Beach Report also aims to raise public awareness of the impact of urban pollution on water quality in the Bay and encourage actions to improve water quality.



The community continues to play a central role in the development of a master plan for the Devilbend Reservoir site.

conservation area that has the potential to become a major tourist attraction is likely to be the key feature of the revamped Devilbend Reservoir site on the Mornington Peninsula.

Natural and cultural heritage values of the 1057-hectare site will be protected and managed into the future and the water body preserved under a master plan being developed by Melbourne Water and a community reference group.

The master plan, which will lead to a management plan for the new owner, will state the community's aspirations for the site.

Melbourne Water Managing Director Brian Bayley said: "We sought the community's views, and they have been loud and clear. They want the significant environmental, cultural and heritage values of Devilbend protected and properly managed for future generations.

"Just as importantly, they want to make sure that any recreational uses

are compatible with the protection of these values."

Studies assessing the environmental, engineering, heritage and archaeological, planning and flora and fauna values and condition of the site were carried out as an important first step of a future use strategy.

The studies found that the site, at West Hastings in the middle of the Peninsula, contains significant Aboriginal cultural heritage values, dating back as long as 5000 years.

The Devilbend site also contains fauna and flora of state and regional significance. Birdlife includes the endangered white-bellied sea eagle and native fish species include the nationally significant (and threatened) dwarf galaxias.

Grassy forests and swamp scrubs, which were assessed as being of state conservation significance, provide good examples of vegetation once common throughout the Peninsula.

Mr Bayley said the master plan would include a:

- Recreation plan to identify future uses.
- Management plan to protect and enhance the site's natural values.
- Management plan for the water bodies.
- Funding plan.

"We have a responsibility to ensure the value to the community of this asset is sustained after we divest it," he said. "Part of our accountability is that we are not going to give the community a problem.

"We're not recreational or heritage experts but we can use our skills in consultation to help the

community get a good management plan in place."

The master plan is expected to be complete by January next year.

The reference group, which was established at the end of 1999 and first met in March last year, includes representatives from local environment and community groups, council, National Trust, State Government departments, sporting and recreational groups and nearby landowners.

It identified a wide range of community issues such as the dam wall, water quality, environmental values, heritage and archaeology, planning scheme provisions and land use practices, as well as future uses.

The site includes Devilbend and Bittern Reservoirs. The decommissioning of the reservoirs is expected to be completed late this year (see report, right).

The water bodies and the likely conservation area comprise about 60 per cent of the site. The other 40 per cent is degraded land that has been used for agriculture, especially orchards.

The site has been closed to the public since Devilbend Reservoir was completed in 1964.

More information on the community consultation process is available in the community section of the Melbourne Water website, [www.melbournewater.com.au](http://www.melbournewater.com.au).



# Landmark for the Peninsula

