



MelbourneWater®



WATERWAYS OPERATING CHARTER

2006



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Werribee River

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ACKNOWLEDGEMENTS

Melbourne Water prepared the first version of this Charter in 1999 with the assistance of an external reference committee. A new group, the Waterways and Drainage Advisory Committee, was established in 2002 to update and revise the Charter. Thanks go to the current Advisory Committee members for their contribution to this edition of the document:

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Peter Carroll	Convenor, Mornington Peninsula Environment Council
Helen van den Berg	Secretary, Friends of Steele Creek
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A Steering Committee was convened to support this current revision, and Melbourne Water sincerely thanks the Committee members for their valuable contributions:

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SUMMARY



Yarra River

Melbourne Water manages Melbourne’s water supply catchments, removes and treats most of Melbourne’s sewage, and manages rivers and creeks and major drainage systems throughout the Port Phillip and Westernport region. Our vision is to work together to ensure a sustainable water future.

The Victorian Government’s White Paper *Our Water Our Future* designated Melbourne Water as caretaker of river health and the authority responsible for drainage, river and floodplain management for the whole Port Phillip and Westernport region.

Our key aims are to ensure that Melbourne’s natural rivers and creeks are healthy, and that our communities are provided with a safe level of flood protection.

The Waterways Operating Charter sets out Melbourne Water’s responsibilities, works and services required to achieve 10-year and long-term aims.

This revision of the Charter has been carried out in consultation with Melbourne Water’s Waterways and Drainage Advisory Committee and a Steering Committee of stakeholder representatives to take account of legislative responsibilities, community expectations and the level of available investment.

Melbourne Water is committed to working with stakeholders in implementing the Charter and reporting annually on performance.

OUR AIMS

1. Community and Stakeholder Engagement

Long-term aim: To have a high level of community and stakeholder understanding and active participation in programs to protect the health of our region's rivers, through the provision of information and promotion of activities.

10-year goal: Increase the level of community participation in river health programs.

2. Managing River Health

Long-term aim: To ensure that Melbourne's rivers and creeks are healthy, with increased numbers of native fish, platypus and plant life.

10-year goal: To have 50% of rivers and creeks in good or better condition by 2015 (as measured by the Index of River Condition).

3. Regional Drainage Management

Long-term aim: Ensure appropriate flood protection standards for existing and new urban areas.

10-year goal: Implement flood-protection measures including planning controls and mitigation works to:

- ensure all new development complies with flood protection standards
- provide protection for a further 2500 properties in flood-prone areas through planning controls when existing properties are redeveloped
- reduce the number of flood-prone properties by 500 over the 10 years from July 2005 to June 2015 through mitigation works.

4. Managing Water Quality

Long-term aim: In collaboration with others, to achieve objectives for water quality in accordance with State Environment Protection Policies and targets set out in the draft Regional River Health Strategy.

10-year goal: In collaboration with others, protect and improve water quality to significantly counteract the effects of growth in greater Melbourne.

5. Development Services

Long-term aim: To ensure that urban development achieves appropriate standards of flood protection and environmental performance.

10-year goal: To implement actions so that:

- all new growth areas in development corridors have drainage schemes in place within three years of significant subdivisional activity commencing;
- redevelopment drainage schemes are progressively prepared at a rate of 10 per year, with priority given to areas where new development activity is most concentrated
- response times are achieved for statutory referrals (all in the specified 21 or 28 days), non-works offers (all in 28 days), works offers (all in 60 days), third party works approvals (95% in 28 days), and flood levels (97.5% in 10 days)
- flood-related property encumbrance updates are completed within one month of Melbourne Water receiving notification of a change in relevant circumstances.

6. Monitoring, Investigations and Research

Long-term aim: Gain a better understanding of waterways in order to manage them efficiently to protect and enhance their values.

10-year goal: Monitor, investigate and research rivers and creeks to better understand their condition, and make substantial progress towards understanding causes of degradation and appropriate management in priority rivers and creeks.

INTRODUCTION

COMMENCEMENT AND TERM

This Operating Charter establishes a blueprint for Melbourne Water's management of rivers and drainage for the three-year life of Melbourne Water's Water Plan (2005/06 to 2007/08).

PURPOSE

This Charter:

- Specifies how the rivers and drainage system will be managed into the future to achieve the objectives that are important to the community
- Brings together the programs and services for rivers, creeks and drainage into a set of commitments against which performance can be evaluated
- Provides the community with detailed information about:
 - responsibilities for providing services
 - the roles of Melbourne Water, councils and other key organisations
 - consultation, priority setting and works standards
 - core goals, strategies and service commitments for each main area of activity.

The Charter is used to define how Melbourne Water manages the system to meet community expectations and Government policies. It is one of the tools used by Government to ensure that Melbourne Water meets its obligations to the community, and it supports pricing submissions to the Essential Services Commission through our Water Plan.

Figure 1 below shows funding outlined in our Water Plan allocated by the Essential Services Commission for capital and operating expenditure to each of the main work areas in this Operating Charter. Funding in the Water Plan covers expenditure in the previous Melbourne Water area only (see Figure 2).

Levels of expenditure in our new areas will be investigated in the next two years as we review our work programs with stakeholders and communities.

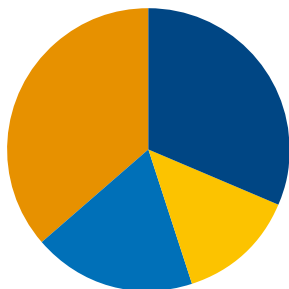


Figure 1 **Capital and Operating Expenditure 2005/06 to 2007/08** (\$M)

- Managing River Health* \$79.6
- Managing Water Quality \$34.2
- Regional Drainage and Flood Protection \$47.1
- Development Services \$91.1

*includes funding for monitoring, investigations and research, and rivers and drainage community projects such as stream frontage management grants

The previous Operating Charter has been revised in light of the Government's White Paper *Our Water Our Future* to incorporate our extended area and new areas of responsibility.

INCORPORATING STAKEHOLDER VIEWS

The Charter was developed in consultation with a nominated Steering Committee and the Waterways and Drainage Advisory Committee, to ensure that stakeholder and community values and priorities were represented.

The review process used for this version of the Operating Charter took into account:

- experience in implementing, monitoring and reporting the commitments in the 1999, 2001 and 2005 versions
- the completion of some previous actions, and commencement of new ones
- changes in the policy framework and strategic directions.

Priorities and targets in the Charter align with those in the Regional Catchment Strategy, the draft Regional River Health Strategy for the Port Phillip and Westernport region and the Yarra River Action Plan. The Charter is also consistent with the Government's White Paper *Our Water Our Future*.

PRINCIPLES

Achieving the targets set out in this Operating Charter is a challenge and has links to all parts of Melbourne Water's business. Melbourne Water has developed sustainability principles to guide the way we work. In addition, the principles below capture our role as caretaker of river health and guide our stormwater, waterway and floodplain management. We:

- manage our rivers and creeks to improve waterway health and enhance opportunities for community enjoyment
- take an integrated and sustainable approach to our work by balancing social, economic and environmental outcomes
- show leadership and work collaboratively with a range of partners to protect river health and provide a safe level of flood protection for communities
- provide opportunities for community involvement to build co-operation, and encourage contribution to river and creek health
- make long-term decisions based on the best available science by undertaking collaborative research and an extensive monitoring and investigations program
- evaluate our performance in a transparent manner to celebrate our achievements and identify where we can improve

Watts River at
Maroondah Reservoir



MELBOURNE WATER'S SUSTAINABILITY PRINCIPLES

Our commitment to sustainability will be demonstrated by:

- Protecting and conserving Melbourne's water resources
- Protecting and improving the environment, including biodiversity
- Our leadership, scientific research, creativity and innovation
- Ensuring responsible risk management
- Sharing information and fostering collaborative working relationships
- Maintaining long-term financial viability
- Contributing to the health of the community
- Demonstrating corporate social responsibility
- Ensuring intergenerational equity by considering short term and long term implications in all decision making
- Providing an environment where employees are encouraged to achieve their full potential.



BACKGROUND

OUR RESPONSIBILITIES

Melbourne Water manages Melbourne’s water supply catchments, removes and treats most of Melbourne’s sewage, and manages rivers, creeks and major drainage systems in the region. We operate constructed drainage assets with a replacement value of \$1.6 billion. These assets include major drains, levees, retarding basins, floodways and pump stations servicing both urban and rural areas.

In our role as caretaker of river health, we are responsible for showing leadership in the management of rivers from their source to sea in a way that recognises the impact of catchment activities on river health. A partnership agreement has been established between Melbourne Water and the Port Phillip and Westernport Catchment Management Authority (CMA). Under this agreement, Melbourne Water delivers river, floodplain and drainage management services and the CMA delivers strategic planning and priority setting for integrated catchment management in the region.

Melbourne Water, as the regional waterway and drainage authority and as caretaker of river health, has a leadership role to play in influencing activities in the region to protect the health of rivers and creeks and to ensure that the drainage system, waterways and floodplains are appropriately managed.

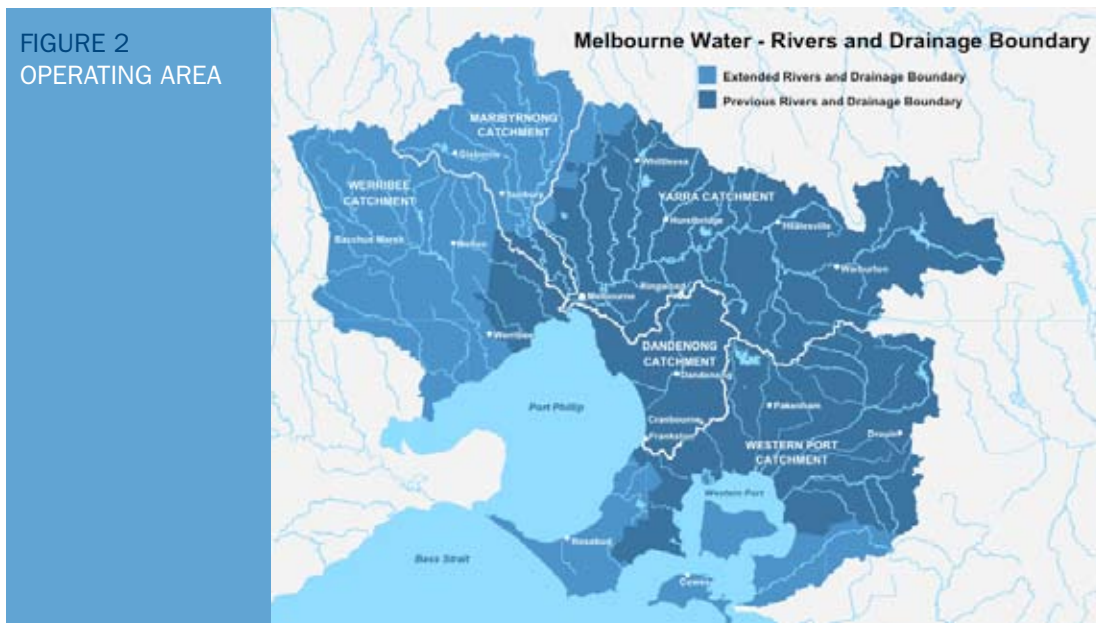
Melbourne Water is accountable for protecting and enhancing the environmental, social and economic values of rivers. We undertake monitoring, research and reporting on river health, develop action plans and implement long-term improvement programs dealing with in-stream habitat, riparian vegetation, streamflows and water quality. We manage the environmental water reserve to ensure a fair allocation of water for the environment to improve the environmental values and health of water ecosystems.

In undertaking our role, we value the work and knowledge of stakeholders and the community, and deliver an extensive array of community involvement, engagement and education activities.

The regulatory and legislative framework applying to these roles and responsibilities is described in the Appendix. The nature of legislation and policies means that specific standards and obligations can be open to interpretation. The Operating Charter clarifies responsibilities and articulates the goals, objectives, targets and work programs relating to our functions.

OUR OPERATING AREA

The Port Phillip and Westernport region covers about 12,800 square kilometres and extends from high up in the Yarra Ranges across to Ballan in the west, and from the Mornington Peninsula and Phillip Island north to Lancefield.



Melbourne Water's new operating area now aligns with the Port Phillip and Westernport CMA boundary and covers the whole of the Dandenong, Westernport, Yarra, Werribee and Maribyrnong catchments. The water resources of the region support a population of 3.4 million people as well as irrigation and other industry.

The rivers and creeks support a diversity of flora and fauna, including aquatic and terrestrial species of conservation significance. The region's rivers and creeks are often focal points for wildlife conservation with remnant streamside vegetation providing important habitat and movement corridors.

Our operating area contains hundreds of wetlands, including three internationally listed under the Ramsar Convention – Edithvale Seaford wetlands, Western Port and Port Phillip Bay (western shoreline).

Rivers and creeks make a significant contribution to the character, landscape and heritage of the region's catchments. They attract more than 100 million recreational visits each year and, in the metropolitan area, form a major component of the city's open space.

Rivers and creeks are a vital part of Aboriginal culture, providing resources, meeting places, transport routes and places of spiritual and community activity. The Aboriginal way of life in the Port Phillip and Westernport region had been adapted over tens of thousands of years to a slowly changing environment. Since European settlement, the catchments of the region and Aboriginal way of life have been significantly modified. The rivers and creeks of the region remain an important part of the indigenous community's identity.

Some 25% of the rivers and creeks in the region are classed as being in excellent and good condition, however most are in moderate to very poor condition (75%), based on the Index of River Condition (see page 15 for more detail). Most classed as good or excellent are in mountainous, forested areas including protected water supply catchments. Those in rural landscapes mostly rate as moderate to poor, principally because of water extraction, loss of streamside vegetation, poor water quality and stock access. Urban rivers and creeks are mostly in poor or very poor environmental condition because of changes to natural streamflows, urban stormwater, channel modifications and replacement of native vegetation with introduced species and weeds. However these urban rivers and creeks have very high social value and are important areas for recreation and contribute to the liveability of Melbourne.

The Yarra catchment has the greatest percentage of rivers and creeks in good to excellent condition, reflecting the large proportion of its headwaters in protected forested catchments. Most rivers and creeks in the rural-dominated Werribee, Maribyrnong and Westernport catchments are in moderate to poor condition. Most rivers and creeks in the urban-dominated Dandenong catchment are in poor condition.

OUR NEW AREAS

Until November 2005, no designated authority was clearly responsible for managing rivers, creeks and regional drainage in 40% of the Port Phillip and Westernport region. To manage the region in a more integrated and holistic way, Melbourne Water was designated as the authority responsible for waterway, regional drainage and floodplain management for the whole region.

We are gearing up and working with the community and local government to establish services in the new areas, and estimate it will take about two years to consult with the community, finalise management and service levels and investigate funding arrangements. We are working closely with 10 councils, stakeholders and the community in the new areas to exchange information as we clarify and formalise working arrangements, and will have a regional presence through offices and regional co-ordinators.

We value the importance of local knowledge, understanding community priorities in our new areas, establishing relationships and sharing information with the community and other interested parties. This will enable us to devise long-term programs for delivering drainage, flood protection, water quality, river health and servicing development in our new areas.

COMMUNITY AND STAKEHOLDER ENGAGEMENT

Community engagement is a key part of Melbourne Water's business. The Port Phillip and Westernport region has an active community that has carried out a vast amount of work to improve rivers and creeks. Community involvement has long been regarded as essential to increasing understanding, changing attitudes and behaviour, clarifying social expectations and improving our priority setting. We will continue to work with the Port Phillip and Westernport CMA to ensure the community is engaged in river, floodplain and drainage management within an integrated catchment management context.

COMMUNITY AND STAKEHOLDERS

The Port Phillip and Westernport region is home to more than 3.4 million people. The population of the region is diverse in terms of economic status, age, education, ethnic background and religion. More than 550 volunteer community groups undertake activities related to catchment and river and creek health. Strong community awareness and involvement is essential to protect and enhance river health, and better knowledge, understanding and more widespread co-operation is also important in achieving goals for flood protection and other key priorities. Engagement with indigenous communities is important as they provide a vital link to the heritage and cultural values of this region.

Awareness and involvement are the key aims of our website and publications such as The Source, project working groups and advisory committees. Community engagement programs include Melbourne Waterwatch, Melbourne Water Frog Census and community grants. The community and other stakeholders have also been involved in preparing stormwater management plans, streamflow management plans, waterway activity plans and the draft Regional River Health Strategy.

The community is an integral part of our decision-making process. Involving the community adds to our knowledge and helps us understand and meet community expectations.

Our new committees

A new structure for Waterways Committees has been developed to more widely involve our stakeholders and the community in decisions we make.

A Strategic Advisory Committee comprising major stakeholder groups will provide high-level advice to Melbourne Water on:

- waterways management strategies and works programs
- the Waterways Operating Charter
- reporting against performance targets.

Underpinning this, a local consultation and engagement framework will be developed and implemented to enable local input to works programs, and support for community and stakeholder activities related to waterways and drainage.

Melbourne Water will also sit on an independently chaired Yarra Coordination Committee, being established by the Government, that will advise on the implementation of the Yarra River Action Plan and improve the coordination between the key agencies with responsibilities for the health of the Yarra River.

Until recently, consultation with relevant indigenous communities has been limited and focused on sites where works were proposed. Development of the draft Regional River Health Strategy involved meetings and workshops with some indigenous communities. The strategy contains a program of community and stakeholder engagement, which includes indigenous communities. To further this work, we are developing a cultural heritage strategy that will be part of our planning for each project.

Melbourne Water people play an important part in engaging the community through attending liaison and co-ordination meetings with other agencies, councils and community groups and providing information on major rivers and drainage issues. Community engagement is a key priority in planning and delivering services in our new areas.

Community engagement in our new areas

We will continue to build relationships with stakeholders and community groups in these areas. We are working closely with 10 councils, stakeholders and the community to exchange information as we clarify and formalise working arrangements. We value the importance of understanding local priorities in these areas, and sharing information with the community and other interested parties. We will have a regional presence through offices and regional co-ordinators.

Table 2 below indicates the range of stakeholders with whom we work, identifying the main categories of people we serve.

TABLE 2 WATERWAYS STAKEHOLDERS
<p>Individuals All the people (including ratepayers) who directly or indirectly pay for and/or benefit from the services provided.</p>
<p>Residents and users Individuals who live near, or undertake activities on, drainage reserves, rivers, creeks and other assets, including floodplains.</p>
<p>Indigenous community The region is the country of the Woiworung (Maribyrnong, Dandenong, Yarra), Boonerwung (Westernport) and Wathurong (Werribee) communities.</p>
<p>Interest groups Environmental and community organisations such as Environment Victoria, advisory and co-ordinating committees, local conservation, Landcare and 'Friends of' groups.</p>
<p>Industry groups Land developers, design and construction industries and other public utility providers undertaking building works that have direct impacts on, or receive benefits from, the waterways system.</p>
<p>Councils Councils provide local drainage systems and regulate land use and management.</p>
<p>Waterways Advisory Committee Provides high-level advice to Melbourne Water on Waterways management strategies and work programs, and reporting against performance targets.</p>
<p>Port Phillip and Westernport Catchment Management Authority Co-ordinates natural resources and catchment management in the Port Phillip and Westernport region.</p>
<p>EPA Victoria Environment protection. Develops water quality objectives, regulates discharges, prevents pollution and enforces environmental regulation.</p>
<p>Department of Sustainability and Environment Develops and implements overarching policy framework for water resources in the state including strategic directions and investment in river health.</p>
<p>Other agencies Department of Primary Industries – Provides information and advice on improving agricultural practices to minimise impacts on river health and water quality. Department of Human Services – Provides information and advice on human health and recreation. Parks Victoria – Manages recreational and commercial boating along tidal sections of the Yarra, Maribyrnong and Patterson Rivers as well as litter in the lower Yarra and Maribyrnong. Port of Melbourne Corporation – state-owned enterprise that manages land and water in the lower Yarra around the port.</p>
<p>Suppliers Companies providing materials, goods and services to, or undertaking maintenance and construction work for, Melbourne Water.</p>
<p>Water supply companies Retail water businesses (City West Water, South East Water, Yarra Valley Water and Western Water) to whom we supply water and with whom we have water supply agreements.</p>
<p>Other water authorities Southern Rural Water – wholesaler of water to rural water authorities, provides water to irrigators and responsible for managing groundwater in the Port Phillip and Westernport region. Barwon Water, Central Highlands Water, Gippsland Water, and Westernport Water – rural-urban water authorities providing water to rural towns in the Port Phillip and Westernport region.</p>

COMMUNITY AND STAKEHOLDER ENGAGEMENT

AIMS AND OBJECTIVES

Long-term objective

To have a high level of community and stakeholder understanding and active participation in programs to protect the health of our region’s rivers, through the provision of information and promotion of activities.

Specific 10-year goal

Increase the level of community participation in river health programs.

COMMUNITY EDUCATION

Education on rivers and drainage is an integral part of our community engagement program.

Programs such as Melbourne Waterwatch, Melbourne Water Frog Census and other programs such as the platypus research program are important means of raising awareness and involving the community in activities to monitor and improve river and creek health. Most participants in these programs are school and community groups. By encouraging the community to visit and monitor aspects of rivers and creeks, these programs enhance people’s connection to rivers and creeks and improve the community’s willingness to take action to protect these environments.

Melbourne Waterwatch is a national program, co-ordinated in Victoria by the Department of Sustainability and Environment, and funded by Melbourne Water, the Natural Heritage Trust, every council in greater Melbourne, and several other organisations. Melbourne Water is the regional co-ordinator for the Port Phillip and Westernport region.

In 2004/05, more than 30,000 people from over 300 groups monitored 312 sites. This is a 10% increase in participation on the previous year. With so many keen volunteers, the focus of our work on the Melbourne Waterwatch scheme now is to improve the knowledge and capabilities, not number, of participants.

The Melbourne Water Frog Census has grown dramatically in recent years. In September 2005, the program had more than 1000 registered volunteers. The program is run in partnership with the Amphibian Research Centre. It includes community-based frog monitoring in which volunteers record calls of local frogs, and targeted monitoring, in which volunteers look for threatened, endangered or locally rare species. The census is carried out twice a year – in Spring and Autumn – and volunteers have recorded frogs at more than 250 rivers, creeks and wetlands in greater Melbourne.

We also work with industry organisations and fund stormwater industry training programs such as Green Gardeners and Green Smart Builders.

Melbourne Water is committed to co-ordinating and sustaining community involvement in river and creek health programs through a range of community education and awareness activities.

Performance Target	Melbourne Waterwatch will continue to be supported and participation levels will be maintained.
Measurement	Performance will be assessed each year by reference to records of numbers of participants involved in Melbourne Waterwatch.
Performance Target	The Melbourne Water Frog Census will be supported, with a minimum of 30 new participants each year.
Measurement	Performance will be assessed each year by reference to records of numbers of participants involved in the Frog Census program.



We also have an education website (melbournewater.com.au/education) that includes sections on healthy rivers and creeks, drain safety and stormwater, and an animated interactive site on flooding. A new website (melbournewater.com.au/ouryarra) provides localised information that encourages people to get involved in protecting and improving the health of their local river or creek in the Yarra catchment.

A major education project is at the Edithvale-Seaford wetlands, an internationally recognised Ramsar site, where we are investing \$3 million in constructing an education centre and interpretive wetlands trail. The masterplan was developed in close consultation with key stakeholders and the community, including the Friends of Edithvale-Seaford Wetlands. The facilities are expected to become a model for wetlands education in the south-east.

Other community education activities undertaken by Melbourne Water include advertising and media campaigns, curriculum material and general information on subjects such as water storage levels, water supply, drainage, floods and litter.

Waterwatch activities with students from Ashwood School near Gardiners Creek in Burwood. Waterwatch co-ordinator Keir Jarvis with junior primary students studying a sample of waterway creatures

Performance Target	The River Health Communication and Education Plan will be finalised in consultation with the Advisory Committee and implemented.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of completing the above activities.

COMMUNITY AND STAKEHOLDER ENGAGEMENT

GRANTS TO THE COMMUNITY

Melbourne Water continues to work closely with the community to protect and revitalise our rivers and creeks. The communities of the region have carried out a vast amount of work to improve rivers and creeks. Melbourne Water assists by running several grants programs that help individuals, community groups and agencies carry out river health projects, providing about \$1.7 million in rural, urban and education grants in 2004/05.

We will continue to provide grants under the Stream Frontage Management Program to rural landholders (usually farmers) to improve the environmental, social and economic values of rural rivers and creeks by restoring and protecting their stream frontage land (freehold or leased/licensed Crown land water frontages). Works include:

- fencing
- off-stream stock watering
- weed control
- revegetation.

Since 1999, annual expenditure on this program has increased significantly, with almost \$700,000 provided to landholders in 2004/05. Since 1996, almost \$5 million has been provided to more than 1100 recipients to protect about 500 kilometres of waterways, and more than 746,000 trees and shrubs have been planted.

Melbourne Water also provides grants to community volunteer groups such as ‘Friends of’ and Landcare groups for revegetation projects, establishment of indigenous nurseries and revegetation equipment across the Port Phillip and Westernport region. Some \$100,000 was provided to community groups in 2004/05 for waterway improvement projects through the Melbourne Water Community Grants program. In addition, we provided some \$250,000 to councils in 2004/05 for riparian weed control and revegetation on public land across the region through the Melbourne Water Corridors of Green program.

Grants are also provided for community education programs including the Young Watercare Grants, the primary schools calendar project, the secondary schools Environmental Champion awards, the Active Catchment Education stormwater model and a range of individual projects that strengthen community understanding of rivers and drainage issues.

Waterway grants to the community and councils are based on a number of criteria.

Programs are carried out:

- on very high or high priority rivers (according to the draft Regional River Health Strategy)
- where the community, Landcare groups or landowners can assist in providing ongoing maintenance
- where opportunities exist to protect rare or threatened species or vegetation types
- along waterways that have a waterway management plan or where works complement existing or planned Melbourne Water activities

Our grants programs are coordinated with other grants programs in the region including the Port Phillip and Westernport CMA’s Community Grants Program. This ensures that grants for waterway management are linked where appropriate to land and biodiversity management.

Performance Target	A minimum of 45 community projects relating to waterways will be supported each year.
Measurement	Performance will be assessed by reference to records of community projects given financial assistance.

PRESERVING CULTURAL HERITAGE

One of the goals in Melbourne Water's Strategic Framework is to preserve and promote our cultural heritage.

Melbourne Water is developing a Cultural Heritage Strategy, which will include guidelines for our people to ensure that business activities do not threaten the integrity and values of sites and places with significant cultural heritage. We work to protect indigenous cultural heritage values in areas that we manage such as Edithvale-Seaford wetlands. We also protect items of significance in relation to post-European settlement such as Dights Falls on the Yarra River.

Performance Target	Rivers and drainage-related projects will follow guidelines set out in the Cultural Heritage Strategy.
Measurement	Performance assessment will be based on assessing projects to ensure Cultural Heritage Strategy guidelines have been followed.

RESPONDING TO ISSUES OR COMPLAINTS

Melbourne Water is committed to providing timely, informative and helpful responses to issues or complaints raised by customers and the community, in a transparent and consistent manner.

There are several avenues through which we respond to customers and the community. This ranges from calls to the 131 722 enquiry line, feedback from email enquiries generated from the Melbourne Water website, to formal complaints lodged with the Energy and Water Ombudsman Victoria.

Our people who work at the Enquiry Centre provide information on a wide range of subjects such as drainage rates, flood levels, water quality information, rainfall data and maintenance issues regarding our rivers and creeks.

More complex enquiries or complaints are entered into the Customer Complaints and Enquiries system and referred internally to the relevant expert areas for a more detailed response and resolution.



Tree planting to improve river health

MANAGING RIVER HEALTH

OUR RESPONSIBILITIES

Melbourne Water is the caretaker of river health for the Port Phillip and Westernport region. We are responsible for achieving healthy rivers, creeks and floodplains that meet the environmental, economic, recreational and cultural needs of current and future generations (Victorian River Health Strategy 2003). This is achieved by:

- working with stakeholders and the community to manage practices that affect the health of rivers and creeks
- undertaking works programs to improve or create habitat, stabilise channels and improve water quality
- undertaking planning and investigations to improve our understanding of the health of rivers and improving flow
- ensuring land development is planned to protect and enhance rivers and creeks.

An important part of this role involved working with stakeholders, including the Port Phillip and Westernport Catchment Management Authority and the community, to develop the draft Port Phillip and Westernport Regional River Health Strategy, which establishes:

- a common vision for river and creek management in the region
- a five year blueprint for agencies and communities to work together to improve rivers and creeks
- broad priorities for rivers and creeks
- regional goals and targets for river health and associated management programs.

SETTING OUR PRIORITIES

Consistent with the Victorian River Health Strategy, priorities for the protection and rehabilitation of rivers and creeks are based on:

- protection of existing high value areas or areas in good condition
- rehabilitation of those areas where there is the highest environmental and community gain for the resources invested
- community commitment towards long-term improvement of river health.

Actions identified in the draft Regional River Health Strategy are being translated into a program of works for rivers. These actions were derived from an assessment of the environmental, social and economic values of the rivers and creeks, the risks to these values and the above philosophies.

In highly modified rivers and creeks the potential to achieve environmental improvements may be limited. However, in these waterways the aim of works will be to protect or improve the social or amenity values in line with community expectations.

Managing risks to public safety and public and private assets (eg roads and bridges) is also given priority in expenditure. Melbourne Water is committed to protecting and improving the amenity of all our rivers and creeks.

Our river restoration works are prioritised using a risk-based approach through the Melbourne Water STREAMs decision support system, in conjunction with waterway plans and geomorphological studies. The concept of the STREAMs system has been developed into a similar computer model (RiVERS) that is being applied by Victorian catchment management authorities to develop their Regional River Health Strategies and to help determine management priorities.

Water quality improvement works, such as wetlands, are prioritised according to their cost-effectiveness in achieving targets, such as nitrogen reduction outlined in strategies aimed at reducing pollution of rivers, creeks and the bays.

CURRENT STATUS

River and creek condition is increasingly important to people in the Port Phillip and Westernport region. Melbourne Water has sought community views on rivers and creeks regularly over the past 10 years by undertaking market research in our previous area. This research has indicated that satisfaction is increasing. In 2004, most of those surveyed were satisfied with their local river or creek, and most thought their river or creek was in better condition than five years ago. The survey found that, in general, people value their local rivers and creeks and that good access, safety, appearance and natural surrounds are important. In contrast, the key issues reported to influence dissatisfaction were litter, dirty water and pollution.

Some 68% of those surveyed indicated that protecting the environment should be the first priority of management.

Many attributes combine to make up the condition of rivers and creeks. Melbourne Water rates the environmental condition of rivers and creeks using a compound indicator called the Index of River Condition. This is based on a similar indicator (Index of Stream Condition) designed for rural rivers and used by management authorities and government departments in the rest of Victoria, but modified for the Port Phillip and Westernport region to take account of urban rivers and creeks.

The Index of River Condition combines the scores for the five major attributes of physical form, streamside zone, hydrology, water quality and aquatic life. It is a numerical score that translates into a rating of excellent, good, moderate, poor or very poor.

The Index of River Condition rating has been complemented with data from Melbourne Water's extensive water quality and biological monitoring programs, which examine 72 sites around the region.

Over the past five years, all rivers and creeks in the Port Phillip and Westernport region have been rated using the Index of River Condition. Some 25% of rivers and creeks assessed are in good or excellent condition and 75% are in moderate to very poor condition (see Table 3), mostly due to changes in flow, poor water quality and changes in land use. Our objective is to ensure that rivers and creeks in the Port Phillip and Westernport region are healthy, with increased numbers of native fish, platypus and plant life.

Generally there is a gradual decline in river health from a river or creek's headwaters towards the sea. The condition of rivers also worsens the closer they are to population centres, reflecting the impact of people and activities in the catchment. Highly urbanised rivers, although often exhibiting poor to very poor environmental condition, retain important natural values and very high social values. The lower Yarra, for example, is a major natural feature of Melbourne's landscape and has shaped the city's development.

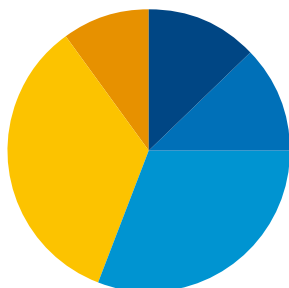


Figure 2 **Overall Index of River Condition for rivers in Port Phillip and Westernport region (2003/04)**

- Excellent 13%
- Good 12%
- Moderate 31%
- Poor 34%
- Very poor 10%

MANAGING RIVER HEALTH

Platypus are an indicator of the health of rivers. Surveys conducted by Australian Platypus Conservancy biologist Geoff Williams, show that “Platypus are occurring in larger numbers along the Yarra in Melbourne’s middle suburbs... with sightings in Fairfield and Kew.”



AIMS AND OBJECTIVES

Our aims for rivers and creeks are linked to achievement of the 10-year resource condition targets identified in the draft Regional River Health Strategy.

TABLE 4 RESOURCE CONDITION TARGETS	
Target	Melbourne Water’s Target*
Length of rivers and creeks in excellent or good IRC condition	3500 km
Number of high value river reaches meeting environmental flow objectives	5
Length of river showing improvement in streamside condition	3600 km
Length of river with improvement in IRC physical form sub-index rating	3400 km
Improvement in IRC aquatic life sub-index rating	2800 km
Increase in river length made accessible for fish movement	1500 km
Kilometres of ecologically healthy river reaches maintained	1300 km
Percentage of monitoring sites meeting SEPP objectives or regional targets established through the SEPP “Waters of Victoria” risk assessment process	80%

* these targets only relate to the previous Melbourne Water boundary prior to the November 2005 expansion.

Long-term objective:

To ensure that Melbourne’s rivers and creeks are healthy, with increased numbers of native fish, platypus and plant life.

Specific 10-year goal:

To have 50% of rivers and creeks in good or better condition by 2015 (as measured by the Index of River Condition).

PROGRAMS:

1 RIVER HEALTH PLANNING

Waterway plans are used to develop works programs within Melbourne Water and for other landowners, managers and community groups. They are developed in consultation with councils, key government agencies and other local stakeholders such as 'Friends of' groups. The plans are the principal means to co-ordinate many diverse management activities that occur along rivers and creeks and to identify guidelines for future public use.

Two types of plan are currently produced:

1. Activity plans – produced for urban rivers and creeks where open space and recreation are also important.
2. Geomorphological plans – developed for rural rivers and creeks where there is a need to understand geomorphological change.

Plans are revised twice over their 15-year life to review progress, reassess priorities and consider new requirements and changes in stakeholder needs and expectations. A key part of the review process is to monitor implementation of the recommendations in the original plans, and to update the actions in light of changes in any of the relevant factors, including the way priorities are set.

Performance Target	Waterway plans for rivers of high social and environmental value will be prepared to meet the implementation targets in the Regional River Health Strategy, as defined in the Water Plan, and will be reviewed twice over their 15-year life.
Measurement	Performance assessment will be based on evaluating progress towards this target.
Performance Target	Develop and implement a program for delivery of waterway management services in our new areas in consultation with stakeholders and the community.
Measurement	Performance assessment will be based on evaluating progress towards this target.



View of city from Richmond across Yarra River

MANAGING RIVER HEALTH

2 MANAGING RIVER FLOWS

Environmental flows are an important component of river health. Streamflow volumes and patterns are altered by water abstraction and dam releases at a variety of scales, from individual farmers on minor creeks through to water supply reservoirs on large rivers.

Bulk water abstractions by water authorities are managed under Bulk Entitlement Agreements that are negotiated with the Department of Sustainability and Environment after considering the environmental flow requirements of the rivers in question. Bulk entitlements contain requirements to release water to the environment and set maximum annual abstractions.

Streamflow management plans collectively govern streamflow diversions by individual licensees (such as farmers) to ensure that adequate environmental flows are protected. The Minister responsible for the Water Act must approve each plan. Nine river catchments in the Port Phillip and Westernport region were identified in the Government’s White Paper, *Our Water Our Future*, as requiring streamflow management plans: upper Maribyrnong River, Plenty River, Steels, Pauls & Dixon’s Creeks, Stringybark Creek, Hoddles Creek, Little Yarra River, Woori Yallock Creek, Olinda Creek and Diamond Creek.

Plans are developed by community consultative committees and implemented by the relevant water licensing authority. The licensing authority generally leads the development of streamflow management plans; the upper Maribyrnong River is the responsibility of Southern Rural Water while the remaining eight are the responsibility of Melbourne Water.

For minor unregulated creeks where the preparation of streamflow management plans is not justified (e.g. because there are too few licensed diverters to be able to influence flows), local management rules are developed to ensure that water extraction does not increase beyond historic or sustainable levels and to establish minimum environmental flow requirements.

Performance Target	Environmental flow regimes will be negotiated through streamflow management plans at a rate sufficient to complete the required eight plans for submission to the Minister by December 2009.
Measurement	Performance assessment will be based on annual evaluation of the adequacy of progress made towards the 2009 target.

The environmental water reserve

One of Melbourne Water’s responsibilities identified in *Our Water Our Future* is the management of an environmental water reserve in rivers and aquifers. This reserve refers to the share of water set aside for the environment purposely, through specific environmental flows in a river, or more generally as the remaining, unallocated water in a catchment.

Melbourne Water’s environmental water reserve interests also extend to groundwater-dependant ecosystems, including streams that rely upon groundwater discharge for their base flow. Melbourne Water has a role in identifying groundwater recharge and discharge patterns and understanding the subsequent risks of groundwater extraction on streamflows. There are a small number of priority aquifers in the region that are managed by Southern Rural Water.

Our role is to protect the environmental water reserve by:

- investigating the environmental water requirements of priority rivers and creeks
- negotiating appropriate groundwater extraction regimes
- providing input on bulk entitlements
- developing or providing input on streamflow management plans.



Watts River at Maroondah Reservoir

Melbourne Water is investigating the environmental water requirements of the eight rivers requiring streamflow management plans and four rivers that are described in *Our Water Our Future* action plan as being already fully allocated (Yarra, Maribyrnong, Werribee and Tarago). Six estuaries – the Yarra, Werribee, Maribyrnong, Bunyip, Lang Lang and Bass – have also been identified as requiring an assessment of their flow requirements through development of the Regional Water Quality Improvement Plan (see “Managing Water Quality” section for more detail). It is envisaged that these investigations will be complete by 2010.

Performance Target	Melbourne Water will investigate the environmental flow requirements of 12 rivers and six estuaries in the Port Phillip and Westernport region at a sufficient rate to complete them by 2010.
Measurement	Performance assessment will be based on annual evaluation of the adequacy of progress made towards the 2010 target.

Central Region Sustainable Water Strategy

A Central Region Sustainable Water Strategy is being developed for Melbourne, Geelong, Ballarat and Westernport. It aims to secure affordable water supplies for cities and towns, industry, agriculture and the environment for the next 50 years and will recommend environmental water reserve volumes for rivers in the Port Phillip and Westernport region. The Strategy will be developed by a steering committee including representatives from Melbourne Water, catchment management authorities, retail water companies and other stakeholders. Environmental flow investigations undertaken by Melbourne Water will provide the information to identify the environmental water requirements of rivers in the region.

MANAGING RIVER HEALTH

3 RIVER AND CREEK IMPROVEMENT PROGRAMS

Melbourne Water invests more than \$26 million per year to protect and improve the health of our rivers and creeks, which is supplemented by Victorian Government funding. We have a healthy rivers program which implements river and creek improvement works. Annual capital expenditure is about \$8 million. River and creek restoration projects include:

- improving waterway bed and banks
- creating and improving habitat
- removing weeds
- replanting streamside vegetation.

To help protect river health, all works on waterways require Melbourne Water’s approval. Conditions to protect the values of rivers or creeks are added to approvals where these are not apparent in the original development application. This ensures that acceptable standards are applied to protect rivers and creeks, irrespective of land ownership and other considerations. Melbourne Water receives development applications directly from proponents or as referrals from councils. Instances of works proceeding without appropriate approval are vigorously pursued through appropriate legal mechanisms to seek redress and improve public awareness of the requirements.

Performance Target	Where required, all approvals of works on the beds or banks of rivers or creeks will include conditions to protect values.
Measurement	Performance assessment will be based on audits of works approval records to ensure values are protected in all works.
Performance Target	All instances of known unauthorised works affecting rivers and creeks will be vigorously pursued, and a summary of proceedings will be reported annually.
Measurement	Performance assessment will be based on records of actions taken in relation to unauthorised works.

Melbourne Water’s maintenance works forms an important aspect of our river health program by ensuring:

- the condition of the river or creek system does not deteriorate
- assets are protected
- adequate measures are taken to ensure public safety
- normal obligations such as fire prevention works and shared fencing costs are met.

Maintenance activities include rubbish removal, desilting, weed control, replacement of fencing, signage, minor stabilisation works and repairs to structures. The maintenance program is implemented in consultation with landowners, local residents and other stakeholders.

Priorities for capital and maintenance river and creek restoration works are based on those identified in the draft Regional River Health Strategy. These restoration works will meet targets set for:

- area of streamside land under management agreements
- kilometres of streamside land revegetated
- number of barriers where fish passage is improved
- length of river subject to streamside weed control
- rivers where heritage values can be protected or improved
- number of sites subject to bed and bank stabilisation.

Meeting these interim implementation targets will help meet the 10-year resource condition targets outlined in the draft Regional River Health Strategy (see Table 4).

Performance Target	River and creek restoration works will be delivered each year in accordance with the approved program and priorities to meet the implementation targets in the Regional River Health Strategy, as defined in the Water Plan.
Measurement	Performance assessment will be based on evaluating the extent to which the approved program is achieved each year and contribution made to the achievement of resource condition targets set by the draft Regional River Health Strategy.



Cardinia Creek
Fishway at
Clyde North

REGIONAL DRAINAGE AND FLOOD PROTECTION

OUR RESPONSIBILITIES

Melbourne Water is responsible for regional drainage management, generally in catchments greater than 60 hectares. This involves the provision of a safe, effective system for transferring stormwater run-off through a network of major underground drains, overland floodways and waterways. Councils are responsible for the local drainage network, generally in catchments of less than 60 hectares. A distinction is made between 'regional' or 'main' drainage and 'local' or 'minor' drainage to help clarify responsibilities.

Our drainage responsibilities involve managing the quantity and quality of run-off from rural and urban catchments to provide communities with a safe level of flood protection, and ensuring the effect of development on floodplains is fully assessed.

This is achieved by:

- limiting development in floodplains and overland flow paths to preserve these areas for storage and conveyance of floodwaters and protect the health of floodplains
- ensuring new urban areas are planned to incorporate stormwater treatment and to accommodate overland flows of floodwaters without threat to property or public safety
- building and operating infrastructure such as drains, levees, retarding basins and wetlands to contain, detain, convey or treat stormwater or floodwater
- operating a flood-warning network on major rivers and creeks
- increasing awareness of flooding risks through education programs
- encouraging softer engineering approaches such as Water Sensitive Urban Design to reduce imperviousness and subsequent runoff volumes
- working with councils to introduce planning controls to identify land subject to inundation or overland flows.

SETTING OUR PRIORITIES

Priorities are based on cost-effectiveness in reducing the risk of damage to property as well as risks to public safety and the health of floodplains. Effectiveness is estimated by analysing the number of properties to be protected, flood level and probability information compared with the design and construction costs of alternative solutions. These alternative solutions range from retarding flows in open spaces such as parks, constructing levees or floodways to channel flows, or increasing underground pipe capacity. Where projects are of broadly similar cost-effectiveness, priority is given to those with a recent history of flooding and which have strong support from the community, councils and other stakeholders.

We fund modelling projects and information collected from these to define areas where planning controls should be implemented to ensure appropriate development decisions are made. This information is also used to determine which areas should be given priority for flood protection works.

The works program ensures flooding is addressed in areas with the following requirements:

- significant community demand for works to be undertaken
- properties can be made safe at an acceptable cost
- significant reductions in safety risk that cannot be achieved by other means such as property redevelopment.

It is important we maintain our drainage and flood mitigation assets in good condition to protect and improve their environmental, social and financial values. These assets include underground pipes, retarding basins, spillways, levee banks, pump stations, tidal gates, floodgates and constructed wetlands, and have a replacement value of \$2.7 billion.

Information on the condition of the assets is gathered from formal inspection programs. This data is combined with information on the consequences of failure to prioritise maintenance and replacement works. If a significant threat to public health or safety is found, immediate priority is given to replacing assets or undertaking urgent maintenance.



Replacement of engineering structures and equipment applies mostly to drainage and flood protection assets. Priorities are set using a risk analysis that determines the likelihood and consequences of a failure occurring. The objective is to ensure that critical assets are always replaced or rehabilitated before they fail. Where assets are identified that need to be replaced, the highest priority is given to those that have the highest consequences of failure.

Berwick Springs –
water sensitive
urban design and
flood protection

CURRENT STATUS

Flooding can be classified into two main types: areas affected by riverine flooding and those affected by overland flows.

Riverine flooding occurs when water spreads out from a creek or river with large catchments and has been recognised in most planning decisions for many years. As such, there are not large numbers of properties and houses within the floodplain and most of the larger waterways have floodplains set aside as open space, such as parks and golf courses. A notable exception is the Maribyrnong township where there are several hundred properties within the Maribyrnong River Floodplain.

Underground drainage infrastructure is generally designed to cater for up to 5-year Average Recurrence Interval (ARI) events. Larger events are accommodated through overland flow paths designed into the road network or open space set aside as floodways. Storms can therefore result in localised flooding when the capacity of the drainage system is exceeded.

Serious flooding is an infrequent occurrence in most parts of the Port Phillip and Westernport region. Most vulnerable properties are affected by overland flows in older, fully developed parts of Melbourne where dedicated paths to carry excess stormwater along roads and reserves were not created when the areas were subdivided. This results in flows following natural valleys through properties.

The long-term management focus for these areas is to minimise the impact of flooding, particularly in light of the continued growth that Melbourne has experienced in the past 15 years and expectations that its population will increase by a further one million by 2030. A recent trend of redevelopment of established areas has seen an increase in 'dual-occupancies' and unit developments. The use of planning overlays will ensure that appropriate development decisions are made to address flood risks and that new development complies with contemporary flood protection standards.

Melbourne Water is progressively assessing the safety and property damage risks in flood-prone areas. Where cost effective, flood mitigation projects may be implemented.

REGIONAL DRAINAGE AND FLOOD PROTECTION

LONG-TERM OBJECTIVES AND GOALS

Long-term objective:

Ensure appropriate flood protection standards for existing and new urban areas to provide a safe level of flood protection for communities.

Specific 10-year goals:

Implement flood-protection measures to:

- ensure all new development complies with flood protection standards
- provide protection for a further 2500 properties in flood-prone areas through planning controls when existing properties are redeveloped
- reduce the number of flood-prone properties by 500 over the 10 years from July 2005 to June 2015 through mitigation works.

PROGRAMS

1 FLOOD MITIGATION

Building new infrastructure to better protect properties from flooding reduces the number of vulnerable properties but is very expensive in existing urban areas. Some works are particularly disruptive to the community because they involve modifying open space, digging up roads, and services to lay large diameter pipes or even building between houses. Further work will be undertaken to assess the cost of flood damage, both direct (building, floor coverings and possession impacts) and indirect (disruption, trauma, loss of income etc) in these areas to better clarify the potential benefit of expenditure on flood mitigation projects.

Improving protection when vulnerable properties are redeveloped also reduces flood risk. This is usually achieved by requiring floor levels of all new or replacement dwellings or commercial premises to be set above the level of localised flooding.

Over the next 10 years from 2005, it is estimated that 2500 or more vulnerable buildings will be rebuilt with floors above flood level. While this is a significant improvement, higher floor levels do not change flood frequencies, depths or velocities and therefore do not eliminate all damage, inconvenience and possible safety risks associated with flooding.

Performance Target	Annual expenditure on flood mitigation works will be sufficient to reduce the number of vulnerable properties by 500 over the 10 years to June 2015 in areas where the priority requirements are met.
Measurement	Performance assessment will be based on the cumulative number of properties protected by flood mitigation projects implemented by Melbourne Water.
Performance Target	All new development will comply with flood protection standards. Planning controls will further reduce the number of flood-prone properties by about 250 per year.
Measurement	Performance assessment will be based on a review of planning controls implemented by Melbourne Water.

2 FLOOD-WARNING SYSTEM

The Commonwealth Bureau of Meteorology (the Bureau) has statutory responsibility for issuing flood warnings throughout Australia. Melbourne Water operates an on-line, 24-hour a day rainfall and streamflow monitoring network. Consistent with a Memorandum of Understanding, Melbourne Water provides the Bureau with predicted times and areas of inundation, so that formal warnings can be issued to responsible agencies and the community. We therefore need to provide the Bureau with accurate and clear information in a readily useable format. The Memorandum of Understanding outlines agreed performance standards and protocols.

By agreement with the Bureau, Melbourne Water's flood-warning system relates to the following rivers and creeks:

- Yarra River
- Maribyrnong River
- Bunyip River
- Dandenong Creek
- Diamond Creek
- Plenty River
- Kororoit Creek
- Merri Creek.

These rivers and creeks are large enough to allow predictions and warnings to be made early enough to enable an effective emergency response.

At these locations, locally determined flood levels are set to classify the flows as minor, moderate or major. Flood effects above each height reflect the category of flooding.

A 'notifiable event' is any event during which the level or flow for minor flooding is likely to be met or exceeded on the above rivers and creeks.

Melbourne Water is represented on the Victorian Flood Warning Consultative Committee convened by the Bureau. This committee undertakes periodic reviews of the effectiveness of the flood warning process, and co-ordinates the development and operation of flood warning services in Victoria.

Melbourne Water is also working with councils who have flooding issues to develop and review their Municipal Emergency Management Plans to incorporate information derived from flood studies.

Performance Target	Initial notification and subsequent forecast information will be provided to the Bureau of Meteorology for all notifiable events on stipulated waterways.
Measurement	Performance assessment will be based on the percentage of notifiable events on stipulated waterways for which accurate initial notification and subsequent updates were provided to the Bureau in a timely manner.

REGIONAL DRAINAGE AND FLOOD PROTECTION

3 KEEPING OUR BUILT ASSETS IN GOOD CONDITION

It is essential that our built assets are maintained in good condition and perform in accordance with their design requirements. This will ensure there is no increase in the number of vulnerable properties, or damage done by floods as a result of system deterioration or malfunction. Built assets require effective asset management over the full asset life cycle, so that assets are fully operational and meet public health, safety and environmental requirements.

The current condition of the system is satisfactory considering age and historical construction methods. Most significant problems relate to the capacity of very old brick drains and some concrete drains built before 1960. These are being monitored, refurbished or replaced as required at a rate sufficient to ensure minimal risk of failure. When assets need to be replaced, they may be upgraded to conform to current standards or to reduce flood risk where this is cost effective.

Performance Target	There will be no instances of asset structural failure that result in significant flooding, damage, disruption or personal injury.
Measurement	Performance assessment will be based on reviewing the details contained in Melbourne Water’s records relating to incident notification and response.

4 REGIONAL DRAINAGE AND FLOOD PROTECTION IN OUR NEW AREAS

The extension of regional drainage services into our new areas will involve the investigation of drainage catchments with existing and or developing urban areas. Drainage strategies and schemes will be developed for the appropriate catchments in order to respond to development referrals and to developer-funded works proposals.

A program of flood mapping will be undertaken to understand the flooding risks in the new areas. This information will then be used to feed into planning scheme overlays to trigger planning permit referrals for Melbourne Water for assessment. This will ensure appropriate standards of flood protection are achieved for new development. The information will also contribute to the development of a flood protection program.

In addition to regional drainage functions, Melbourne Water will assume the floodplain management role in our new areas that was previously undertaken by the Department of Sustainability and Environment. The management of the drains and floodplains will be undertaken in a manner that recognises the rural, agricultural and urban nature of the new areas.

We will also be managing the transfer of major drainage assets from local government to Melbourne Water, in close liaison with councils, and will be developing and implementing maintenance programs for them.

In consultation with stakeholders and the community, we are developing a program to ensure the effective delivery of drainage and flood protection services in our new areas.

Performance Target	Develop and implement a program for delivery of drainage and flood protection services in our new areas in consultation with stakeholders and the community.
Measurement	Performance will be assessed each year by reference to Melbourne Water’s records of completing the above activities.

5 FUTURE INITIATIVES

In conjunction with councils and the Department of Sustainability and Environment, Melbourne Water is also developing an integrated drainage and flood protection strategy for the Port Phillip and Westernport region. This strategy will complement a Statewide stormwater strategy being prepared by Department of Sustainability and Environment. It will cover roles and responsibilities for urban drainage management, targets, service level standards and prioritisation methods for mitigation works.

To date, Melbourne Water has adopted a prioritisation mechanism that considers cost-effectiveness of protecting floor levels to a 1 in 100-year ARI. Future consideration will be given to the broader consequences of flooding such as social disruption and loss of business. Alternate approaches to consider the net reduction in flooding risks include improving properties affected by frequent flooding to a standard less than 1 in 100-year ARI (for example, improving their protection from a 1 in 10-year ARI to 1 in 50-year ARI).



Hampton Park
Wetlands

MANAGING WATER QUALITY

OUR RESPONSIBILITIES

State environment protection policy (SEPP) objectives are set by the Victorian Government to protect the beneficial uses of rivers, creeks and the bays. Melbourne Water and other agencies are responsible to help meet these objectives. However, many factors affecting run-off quality and the health of rivers, creeks and the bays are not directly under Melbourne Water's control. Achieving long-term improvements requires effective leadership, liaison and collaboration with numerous other groups and individuals, especially councils.

Melbourne Water seeks to manage run-off from rural and urban catchments to protect the health of rivers, creeks and the bays by:

- working with stakeholders and the community to manage practices that impact on rural and urban water quality
- ensuring land development is planned to improve stormwater quality
- building and operating infrastructure such as wetlands to treat stormwater.

We acknowledge that our initiatives alone may not be able to achieve State environment protection policy objectives, and that we need to work in collaboration with others to achieve our goals for improving water quality.

With adequate progress in other areas such as pollution prevention, sewerage system improvements and improved land management practices that are joint responsibilities of a range of natural resource management agencies including Melbourne Water, Port Phillip and Westernport Catchment Management Authority, EPA Victoria, the Department of Sustainability and Environment, the Department of Primary Industries, urban water authorities and councils, water quality in rivers and creeks should improve in the next 10 years.

Melbourne Water plays a key role in promoting the protection of river and creek health and providing leadership to ensure greater effort is made to educate the community and industry about the need to control pollution. We aim to protect and improve water quality to significantly counteract the effects of growth in greater Melbourne to overcome the legacy of the past.

SETTING OUR PRIORITIES

The Port Phillip Bay Environmental Management Plan identified a need for an annual reduction of 1000 tonnes of nitrogen entering the bay by 2010: 500 tonnes from Werribee Treatment Plant, and an additional 500 tonnes from the catchments. Melbourne Water contributes to this target by aiming to reduce average annual nitrogen loads by 100 tonnes through the creation of wetlands in urban areas. Of the 90 possible sites identified for wetland location, these are prioritised through an assessment of their cost-effectiveness in achieving nitrogen reduction. We also work with councils and the development industry to ensure new development achieves standards set out in the Victorian Planning Provisions.

Working closely with Melbourne Water, all metropolitan councils have developed stormwater management plans with initiatives that improve stormwater quality and protect rivers and creeks including planning, regulation, enforcement, operations, infrastructure and education.

Councils use a risk-based approach to identify priority actions, which are attributed to the relevant authority (for example, the council, Melbourne Water, Parks Victoria). We assess the feasibility and set the priority of actions assigned to Melbourne Water by analysing the most cost-effective actions that will remove the most pollutants.

CURRENT STATUS

Water quality in urban rivers and creeks has improved significantly since the 1970s, mainly because industrial waste has been diverted from rivers and creeks into the sewerage system, and the introduction of large-scale sewerage in Melbourne's suburbs and rural areas. In the past 10 years, water quality has been maintained in the face of increasing urbanisation, population growth and intensification of agriculture.



However, while pollution from industrial discharges, waste disposal and unsewered urban areas has declined, urban stormwater run-off has increased as Melbourne has grown in size and population.

In 1996, the CSIRO Port Phillip Bay Environmental Study found that the greatest threat to the health of the ecological process in the bay was increasing nitrogen, particularly from urbanisation of the catchment.

Although urban areas make up less than 20% of the catchment, they are estimated to contribute 40% of the nitrogen that flows from the catchment to the bay.

Melbourne Water currently funds approximately \$5 million annually on wetlands for existing urban areas and is on track to meet the annual average reduction of 100 tonnes by 2010. We are also working closely with the development industry and councils to increase the environmental performance of developments.

Melbourne Water's Stream Frontage Management Program provides grants to rural landholders to improve the environmental, social and economic values of rural rivers and creeks by protecting and enhancing streamside vegetation and minimising erosion and stock access. Works funded through the program provide a buffer of native vegetation along waterways that helps to improve water quality by capturing sediment, organic material and other pollutants from surface run-off. A buffer of riparian vegetation may also help to intercept airborne pollutants.

Olinda Creek at the Mt Evelyn Reserve where contractors have removed pest weeds and trees

LONG-TERM OBJECTIVES AND GOALS

Long-term objective

In collaboration with others, to achieve objectives for water quality in accordance with State Environment Protection Policies and targets set out in the Regional River Health Strategy.

Specific 10-year goal

In collaboration with others, protect and improve water quality to significantly counteract the effects of growth in greater Melbourne.

MANAGING WATER QUALITY

PROGRAMS

1 BUILDING CAPACITY

Best practice in the environmental management of stormwater run-off requires an integrated approach involving:

- use of statutory planning controls over development and use of land
- regulation of land uses (such as building sites and industry) through state legislation and local laws
- operational programs such as enforcement of regulations, street cleaning, appropriate management of infrastructure, maintenance and construction activities (eg roads)
- infrastructure designed to capture or treat polluted run-off (eg litter traps)
- awareness and education.

Melbourne Water has an important role to play in building the capacity of business and councils to help deliver best practice stormwater management. We helped initiate, and are a key supporter of, the Clearwater capacity-building program for industry and councils. The program, which is managed by the Municipal Association of Victoria and funded by the Victorian Stormwater Action Program, operates as an information exchange and develops and implements education and training for people in industry, councils and Victorian Government agencies. Melbourne Water will continue to contribute knowledge, experience and resources to support this important program.

We are currently managing the Water Sensitive Urban Design component of the Clearwater program and have developed a technical manual known as Water Sensitive Urban Design: Engineering Processes for Stormwater Management. This provides engineering standards and specifications for the design, construction and maintenance of water sensitive design technologies. We also support a wide range of research to improve our knowledge and understanding of urban water systems.

Rural landowners involved with Melbourne Water’s Stream Frontage Management Program are also offered educational opportunities through the program. Training in best-practice “whole of property” and waterway management allows landowners to assess and manage their impacts on river health, including water quality.

Performance Target	Melbourne Water will build the capacity of industry and councils to deliver best practice environmental management of stormwater through a program of initiatives, and will report progress annually.
Measurement	Performance will be assessed on progress against an annual program of capacity-building activities.

2 STORMWATER MANAGEMENT PLANS

Stormwater quality is managed through a memorandum of understanding between Melbourne Water, EPA Victoria and the Municipal Association of Victoria. The agreement focuses on sharing accountabilities and costs for stormwater quality management between Melbourne Water and councils. Melbourne Water helps councils prepare and implement Stormwater Management Plans, and has assigned \$10M over four years (2005/06 to 2008/09) to help implement council stormwater management programs to further reduce stormwater pollution.

These Stormwater Management Plans support the intent of best practice of the Urban Stormwater Best Practice Environmental Guidelines referred to in the SEPP (Waters of Victoria), and have been successfully completed for all municipalities in Melbourne Water's operating area. The plans identify actions for the municipality, actions for Melbourne Water and further initiatives that could be pursued to improve the quality of run-off entering rivers and creeks or affecting beaches.

We are now working with councils in implementing actions that have been identified for Melbourne Water in the completed plans, helping and encouraging councils to implement their actions, and exploring further joint initiatives and developments.

Through the development of Stormwater Management Plans, councils have identified risk issues such as effluent discharge from septic tanks. Trials in establishing domestic wastewater plans have been undertaken with the aim of reducing pollution from these sources.

In our new areas, we will undertake an assessment of council Stormwater Management Plans, identify their priority actions and ways of building this into our program of managing stormwater run-off.

Performance Target	Melbourne Water will implement the actions ascribed to it in Stormwater Management Plans in priority order.
Measurement	Performance will be assessed each year by reference to reports of Melbourne Water's achievements in this area.



Huntingdale Wetlands

MANAGING WATER QUALITY

3 WATER QUALITY INFRASTRUCTURE

Water quality infrastructure includes infiltration systems, litter traps, sedimentation ponds and constructed wetlands, which reduce pollutants in run-off. Water sensitive urban design, financed by developers, incorporates these features in new developments. But in older, more developed areas, this is implemented through our capital works program. Melbourne Water also works with councils to support them in implementing water sensitive urban design principles, such as alternative stormwater systems that reduce run-off volumes and treat stormwater before it reaches rivers and creeks.

The works program is discussed with the Waterways Advisory Committee each year and incorporated in Melbourne Water's annual business plan. A considerable proportion of funds allocated to water quality infrastructure over the next 10 years will address the priority issue of nitrogen inputs to Port Phillip Bay.

Performance Target	Infrastructure will be constructed in accordance with the proposed capital works program to reduce pollutant loads in urban stormwater run-off, including a reduction in average annual nitrogen loads of 100 tonnes by 2010.
Measurement	Performance will be assessed each year in terms of the extent to which estimated nitrogen load reductions have been achieved.

A litter trap in the Yarra River at Burnley captures rubbish washed from our streets into the stormwater system when it rains.



4 IMPROVING THE REGION'S WATER QUALITY

A water quality improvement plan is being developed by Melbourne Water in collaboration with a range of natural resource management agencies including EPA Victoria, the Department of Sustainability and Environment, the Department of Primary Industries, Port Phillip and Westernport CMA and the Municipal Association of Victoria with financial support from the Commonwealth Department of Environment and Heritage. The plan brings together all water quality issues for Port Phillip Bay, Western Port and the rivers and creeks of the Port Phillip and Westernport region.

The three-year project will identify and address key water quality risks to values of Port Phillip and Western Port and the region's rivers and creeks, and provide direction for investment in water quality improvement programs.

The plan, to be completed by 2008, includes a number of projects to support its development, including:

- development of a tool to model water quality and to assess possible solutions
- investigations into institutionalising water sensitive urban design
- recommendations of agricultural best management practices
- investigations into the recreational use of beaches and where our monitoring and investigations should be targeted
- reviewing and improving our water quality loads monitoring program
- investigating the use of 'offsets' to reduce discharges into our rivers, creeks and bays.

Performance Target	Develop a water quality improvement plan for the Port Phillip and Westernport region by 2008.
Measurement	Performance assessment will be based on evaluating progress towards this target.

5 TACKLING STORMWATER IN THE LOWER YARRA

The Yarra River Action Plan identified key projects to improve water quality in the Yarra catchment. The Lower Yarra is under stress because of population growth and urban development, and the behaviour and activities of people living around the river. Water quality in the Lower Yarra is poor due to urban stormwater, litter and faecal contamination.

To improve this situation, a three-year multi-million dollar Stormwater Quality Action Plan has been initiated to improve water quality in the Lower Yarra and provide national leadership in stormwater management.

Activities will involve trialling toxicant traps, implementing council Stormwater Management Plans, initiating water sensitive urban design projects to treat stormwater run-off, and building stormwater management skills and knowledge for councils and industry.

Performance Target	Implement a stormwater quality action plan for the Lower Yarra according to the Lower Yarra Stormwater Action Plan program.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of completing the above activities.

DEVELOPMENT SERVICES

RESPONSIBILITIES

Development planning is undertaken to ensure new urban development meets appropriate standards of flood protection and environmental performance and to equitably allocate among land developers the costs of infrastructure required to service growth. Melbourne Water is a statutory referral authority for planning applications referred by councils.

Melbourne Water prepares drainage strategies and schemes in the growth areas (greenfield schemes) and established urban areas undergoing redevelopment (redevelopment schemes) as part of its planning for urban development. These are strategic infrastructure plans that identify and establish the cost of drainage-related works required to provide for urban development. They set out requirements for waterway, drainage, floodplain and stormwater quality management for urban developments in growth areas, covering the provision of facilities such as underground drains, overland flow paths, retarding basins, wetlands and gross pollution traps, and specify the appropriate treatment and protection of rivers and creeks and any related sites of significance. Their implementation is funded by financial contributions from land developers in accordance with principles agreed with industry and described in the publication Principles for Preparation of Drainage Schemes (Melbourne Water 2003). Consultation with all interested parties such as councils, landowners and agencies such as VicRoads occurs before works begin.

SETTING OUR PRIORITIES

Investment in infrastructure is determined by the rate of development. Drainage scheme infrastructures are generally constructed by the developer when subdivision proceeds. Schemes may remain active for up to 25 years and require ongoing administration to record assets constructed, contributions received and reimbursements paid. Financial reviews are undertaken every year on active schemes and a full engineering review at least once every five years. In greenfield growth areas, the aim is to ensure a scheme is prepared within three years of the start of a consistent pattern of ongoing development. Outside scheme areas, development proposals are approved subject to appropriate drainage conditions, which are developed on a case-by-case basis.

Priorities for scheme preparation are based on predictions of population growth, the designation of land for growth in Melbourne 2030 and land rejoinings.

CURRENT STATUS

Melbourne Water processes about 24,000 town planning referrals, applications for development agreements, flood requests and related items of business per year. In 2004/05, through developer contributions we funded \$35M of new infrastructure to service growth needs, on structures such as pipelines, wetlands, retarding basins and floodways.

LONG-TERM OBJECTIVES AND GOALS

Long-term aim:

To ensure that urban development achieves appropriate standards of flood protection and environmental performance.

10-year goal:

To implement actions so that:

- all new growth areas in development corridors have drainage schemes in place within three years of significant subdivisional activity commencing;
- redevelopment drainage schemes are progressively prepared at a rate of 10 per year, with priority given to areas where new development activity is most concentrated
- response times are achieved for statutory referrals (all in the specified 21 or 28 days), non-works offers (all in 28 days), works offers (all in 60 days), third party works approvals (95% in 28 days), and flood levels (97.5% in 10 days)
- flood-related property encumbrance updates are completed within one month of Melbourne Water receiving notification of a change in the relevant circumstances



PROGRAMS:

1 DEVELOPER SERVICES

In our role as referral authority for planning permit applications to develop land on floodplains, Melbourne Water places conditions to ensure development has no adverse impact on the hydraulic functionality of waterways and floodplains, in terms of flood levels, storage, quantity and direction of flows, and their environmental values. Conditions on land development are made to ensure appropriate drainage standards are adopted, to ensure public safety, control flooding and to protect the health of waterways and floodplains.

Effective and efficient procedures and standards are utilised to prepare responses to referrals and applications consistent with a clear set of standards. External “self-service” access to web-based Land Development Manuals is provided to assist enquiries and guide developers in any subsequent design work. Development conditions imposed by Melbourne Water can be challenged at the Victorian Civil and Administrative Tribunal.

Performance Target	Response times will be achieved for statutory referrals (all in the specified 21 or 28 days), non-works offers (all in 28 days), works offers (all in 60 days), third party works approvals (95% in 28 days), and flood levels (97.5% in 10 days).
Measurement	Performance will be assessed each year by reference to Melbourne Water’s records of response times for the above transaction types.

Lynbrook Estate, built with water sensitive urban design principles

DEVELOPMENT SERVICES

Understanding current flood risk information and the effect that developments have on floodplains is crucial to good property development planning and decision-making, and is very important for people contemplating property purchases. Providing ready and obvious access to this information is the most efficient way of ensuring that flood protection requirements are considered early as part of property development proposals. This information is made available through:

1. Victorian planning provisions that contain one land use zoning and three overlay controls designed to indicate flood related property development constraints in municipal planning schemes
2. Property Information Statements issued on application by the retail water companies that contain detailed flood risk information, provided by Melbourne Water, for individual properties.

A major program of planning scheme amendments and property encumbrance updates has been undertaken to incorporate the results of extensive flood level surveys that began in 1998. Melbourne Water is committed to ensuring that planning schemes and encumbrances are updated at appropriate intervals.

Planning scheme changes, though less frequent, are not as straightforward and incur significant costs. Melbourne Water best meets our transparency obligations to stakeholders by reporting the status of these changes at regular intervals.

Planning scheme amendments, even once exhibited, can take a long time to finalise, depending on objections, panel hearings and time for council decisions and ministerial approval. Many of these factors are outside Melbourne Water's control, so assessment of our performance is based on when changes are placed on the public record by exhibition, rather than when the amendment is approved.

As caretaker of river health and regional waterway and floodplain manager, we recognise the need for further work to strengthen the environmental focus of planning controls.

Performance Target	All future flood-related property encumbrance updates will be completed within one month of Melbourne Water receiving notification of a change in the relevant circumstances.
Measurement	Performance assessment will be based on comparing records of incoming update requirements, such as subdivisions, revised flood level data or flood mitigation projects, with the records of updates completed.
Performance Target	All councils will be provided with up-to-date flood information annually.
Measurement	Performance assessment will be based on reviewing annual information provided to councils.

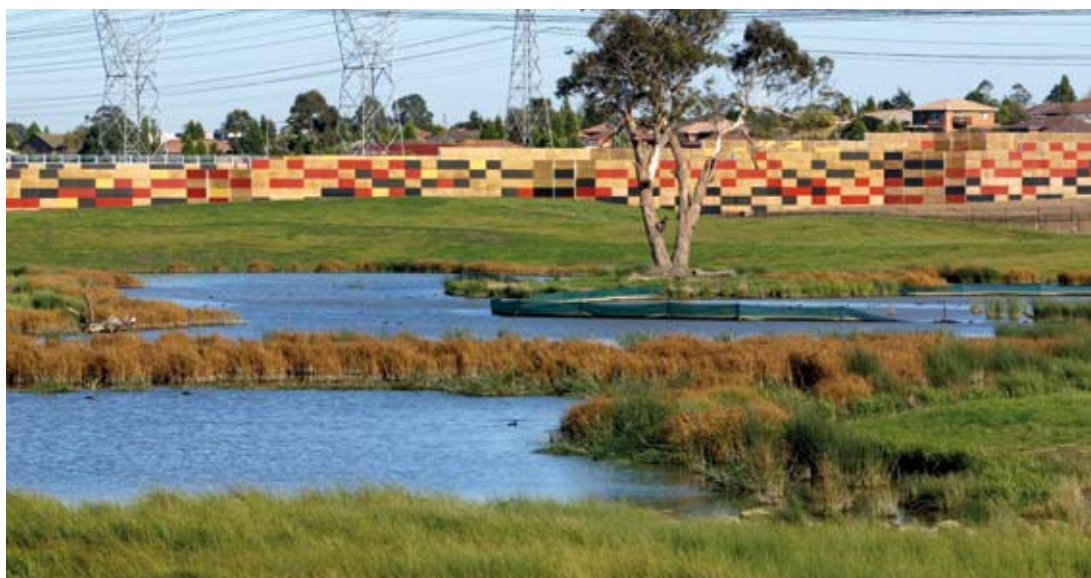
2 DRAINAGE SCHEMES

Melbourne Water prepares two types of drainage schemes to manage its Developer Funded Works Program. Greenfield Schemes are prepared in the growth corridor areas at the fringes of Melbourne. The facilities outlined in these drainage schemes are designed to ensure that urban expansion does not adversely affect levels of flood protection, river or creek condition or stormwater quality as new areas are developed. For large areas, this is achieved by ensuring that development proceeds in accordance with pre-prepared drainage schemes. For areas outside of schemes, for example smaller areas and one-off developments, this is achieved through specifying the conditions under which each individual development may proceed.

A program of preparing redevelopment drainage schemes throughout Melbourne is being implemented to ensure that redevelopment activity, which accounts for an increasing proportion of new dwellings in the metropolitan area, is appropriately serviced. Infrastructure upgrades may be necessary in many areas to ensure that increased run-off created by the higher density of development does not diminish existing levels of flood protection. At least 10 new 'Redevelopment Schemes' will be prepared each year. Priority will be given to preparing schemes in areas where new development activity is most concentrated, such as 'Activity Centres' and transport corridors.

We liaise with councils and other stakeholders in planning to service growth in our new areas with future drainage strategies and schemes, as well as being the referral authority for all subdivision and development proposals in flood-prone land.

Performance Target	All new growth areas in development corridors will have drainage schemes in place within three years of significant subdivisional activity commencing.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of where new development activity is occurring and corresponding progress in developing drainage schemes.
Performance Target	Redevelopment drainage schemes will be progressively prepared at a rate of 10 per year with priority given to areas where new development activity is most concentrated.
Measurement	Performance will be assessed each year against a target of preparing 10 redevelopment schemes a year.



Troups Creek West Retarding Basin Wetlands in Narre Warren

MONITORING, INVESTIGATIONS AND RESEARCH

RESPONSIBILITIES

Melbourne Water is the caretaker of river health in the Port Phillip and Westernport region. A key part of this role is monitoring and reporting river health performance against targets in strategies such as the Regional River Health Strategy and Regional Catchment Strategy, and against State environment protection policy objectives.

We monitor river condition (including water quality, flows, streamside vegetation, stability and aquatic life) to build up a picture of river health, and this is complemented by detailed investigations to identify river and creek improvement opportunities. These programs deliver information that is the basis for management decisions.

We are also responsible for monitoring rainfall and streamflow in the catchments. This information helps Melbourne Water gain an accurate picture of rainfall and the resultant run-off from catchments to support our flood and drought responses as well as maintain environmental flows. The Bureau of Meteorology and retail water companies have direct access to this information and the community can access it via Melbourne Water's website.

We also undertake targeted research with the aim of increasing knowledge and understanding, ensuring that public funds are invested wisely, and improving the efficiency and effectiveness of our work.

SETTING OUR PRIORITIES

Programs highlighted in the draft Regional River Health Strategy and other Victorian Government policy objectives determine our priorities for monitoring. The locations of our water quality monitoring network, which include 16 historical sites that are part of the long-term, Statewide network, along with the sampling frequencies and quality parameters tested, are formally agreed with EPA Victoria. From time to time, EPA Victoria also requires Melbourne Water to undertake specific investigations on its behalf.

Investigation and research programs are guided and prioritised through an annual workshop with key Melbourne Water people. Programs are selected based on criteria such as:

- gaps in our information
- rivers or creeks that are a Regional River Health Strategy priority
- programs that meet multi-business needs
- programs that are considered urgent for environmental, social or economic reasons.

Results of Melbourne Water's monitoring and investigations of river health guide many of our decisions on waterway management.

Research and Development Policy guides research programs that are compatible with our strategic framework. Selection, management and evaluation of research projects conform to our internal Research and Development management approval process.

We contribute to other research through the eWater (enterprise, environment, education) Co-operative Research Centre, of which Melbourne Water is a participant.

CURRENT STATUS

River health monitoring was recently reviewed through development of the draft Regional River Health Strategy, and new programs introduced. In 1997 a major review of the water quality monitoring network was undertaken and this network will be reviewed again as part of the development of the regional Water Quality Improvement Plan. In 2005, the Yarra River Action Plan identified the need to improve the frequency of faecal pollution monitoring on the Yarra. Monitoring has now improved, together with the introduction of investigations into faecal sources in the Yarra river.

AIMS AND OBJECTIVES

Long-term aim

Gain a better understanding of waterways in order to manage them efficiently to protect and enhance their values.

10-year aim

Monitor, investigate and research rivers and creeks to better understand their condition, and make substantial progress towards understanding causes of degradation and appropriate management in priority rivers and creeks.

PROGRAMS

1 RIVER HEALTH MONITORING AND INVESTIGATIONS

We undertake a range of investigations to help us understand the key influences on, and risks to, river health, and the environment our rivers and creeks support. These investigations guide management decisions and help us plan improvement programs. River health monitoring and investigations include water quality, aquatic life, fish, weeds, sediment quality and physical stream condition.

Major rivers and creeks are assessed using the Index of River Condition every five years. A proportion of assessments are completed each year with an emphasis on major basins. Results are published at least every three years. Condition reports are the principal means of documenting changes in river and creek condition over time. They are an important means of communicating with external groups and individuals and the information is essential for planning and decision-making.

Environmental, economic and social (recreation, amenity and cultural heritage) values associated with rivers and creeks are identified in the draft Regional River Health Strategy. Melbourne Water is refining the Index of River Condition to better capture social values.

Despite our extensive and improved water quality monitoring network, and other river health programs, there are significant gaps in our knowledge of some rivers and creeks that are classed as high risk or high value in the draft Regional River Health Strategy. For these rivers, we need to gather further information to enable us to make appropriate management decisions.

Performance Target	The condition of a proportion of rivers and creeks will be re-assessed each year using the Index of River Condition at the rate required to cover all major rivers and creeks every five years.
Measurement	Performance assessment will be based on an annual statement of progress.
Performance Target	Investigations to fill data gaps in high value or high-risk rivers or creeks will be completed to meet the implementation target in the Regional River Health Strategy, as defined in the Water Plan.
Measurement	Performance assessment will be based on evaluating progress towards this target.

MONITORING, INVESTIGATIONS AND RESEARCH

Melbourne Water operates a water quality monitoring program comprising monthly sampling at 72 locations covering all the main rivers and creeks, with analysis of a range of physical and chemical water quality parameters such as nutrients, metals and bacteria. These results are compared with State environment protection policy objectives.

Water quality monitoring and investigations in our rivers and creeks is required for:

- reporting to the community, Government, EPA Victoria and the Port Phillip and Westernport Catchment Management Authority
- analysing trends and revising long-term strategies and action plans
- identifying problem areas and setting year-to-year priorities
- educating the community on water quality issues and their management.

Water quality monitoring results in greater Melbourne have been reported annually since 1994 and are published on our website. This monitoring detects water quality changes over time and delivers information that is the basis for management decisions.

Performance Target	Summary water quality monitoring results from the Melbourne Water network of monitoring sites will be published annually.
Measurement	Performance will be assessed each year by reference to the manner and timing of publication of the specified information.

E.coli are bacteria used to indicate the presence of faecal contamination in rivers and creeks. Melbourne Water monitors *E.coli* in Summer at 72 water quality monitoring network sites and additional key recreation sites, and year round at sites on the Yarra through the Yarra Watch program. This enables us to better understand the water quality associated with recreational river use throughout the year. The initial focus is on the Yarra River due to its high recreational use, where Melbourne Water is implementing a \$930,000 three-year 'hotspots' investigation program, to be completed in 2008. This involves testing at 52 locations along the Yarra and its tributaries to identify likely sources of faecal pollution and to target problem areas for clean-up.

Monthly monitoring is complemented by more detailed investigations on rivers and creeks to assess river health and identify local sources of pollution. Melbourne Water also samples water bodies such as lakes and wetlands for algal blooms in Summer, and is regional co-ordinator for managing bloom outbreaks with EPA Victoria.

To ensure appropriate quality standards are applied to field sampling, laboratory analyses and data management, water quality monitoring and investigations are undertaken only by National Association of Testing Authorities-accredited laboratories.

Performance Target	Complete a program to identify and investigate faecal hotspots in the Yarra catchment by 2008.
Measurement	Performance will be assessed each year by evaluating progress towards this target.

2 HYDROGRAPHIC DATA ANALYSIS AND INVESTIGATIONS

Melbourne Water monitors rainfall and streamflow data at almost 300 sites in the Port Phillip and Westernport region and collects daily rainfall observations from 350 volunteer rain gauge operators.

The data generated is used to:

- prepare flood warnings
- estimate storm recurrence intervals and for flood flow modelling
- aid preparation of streamflow management plans and monitor and report environmental flows
- manage river and creek diversions and drought response
- assess and report river and creek health via the Index of River Condition
- assess performance requirements and design parameters for wetlands, fishways and river and creek stabilisation works
- report on environmental water reserve compliance
- analyse water supply, sewerage and drainage system operations and system capacity
- provide information for water resource planning such as analysing and modelling catchment yield.

Raw data collected on an hourly, daily, weekly and monthly basis are accessible on Melbourne Water's website, however detailed hydrographic data, including historical records, are made available to external parties on request. A fee is charged to offset the annual cost of about \$450,000 to collect, process and store the data. The more the data is used, the greater the return on this investment.

Performance Target	Melbourne Water will annually update and publish a schedule setting out the quality and availability of rainfall and streamflow data and the fees for supplying it, and will meet all external requests for data within 10 working days.
Measurement	Performance assessment will be based on reviewing the published reports about data availability, and on the timeliness of responses to data requests as recorded in a data request tracking system.



Aquatic Scientist
Edward Tsyrlin at
Merri Creek

MONITORING, INVESTIGATIONS AND RESEARCH

3 MONITORING AND INVESTIGATIONS IN OUR NEW AREAS

Melbourne Water is examining how best to incorporate monitoring programs into our new areas. Monitoring of river health and streamflow is being reviewed, as well as our civil assets condition program and flood warning and response systems.

The initial focus of river and creek management will be to establish an understanding of their condition and options for improvement. River health investigations and consultation with councils and the community will help us plan works programs.

Performance Target	Develop and implement a program to review monitoring and investigation programs in the new areas.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of completing the above activities.

4 RESEARCH AND IMPROVEMENTS IN EFFICIENCY AND EFFECTIVENESS

Regional research and investigations contribute to our works programs by filling important knowledge gaps, and providing information on key processes and on the best way to manage river health.

Melbourne Water's research program is implemented via direct funding and in-kind contributions to the eWater Co-operative Research Centre and several other projects. The detailed agreement with the Co-operative Research Centre specifies individual project objectives, research methods, timelines and outputs, and provides detailed reports on performance for each research project.

Involvement in eWater complements Melbourne Water's activities in improving river health, protecting and enhancing aquatic ecosystems, managing stormwater quality and floodplains, and water reuse and recycling.

Research projects must be relevant to the Strategic Framework, and yield results that are directly applicable to business activities. Communication with key stakeholder groups is an important part of this process.

Performance Target	A minimum of three reports will be published each year on rivers and drainage research undertaken or sponsored by Melbourne Water.
Measurement	Performance will be assessed each year by reference to the manner and timing of publication of the specified information.

Performance Target	Two tangible improvements to work methods will be achieved each year as a result of research findings.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of improvements made arising from research findings.

Performance Target	A seminar involving external stakeholders will be held at least annually to communicate results and help develop priorities for further research.
Measurement	Performance will be assessed each year by reference to records of conduct of the seminar.

INCIDENT RESPONSE

Melbourne Water manages an all-hours incident response capability to minimise:

- potential damage to property or the environment
- danger to the health or well-being of the community.

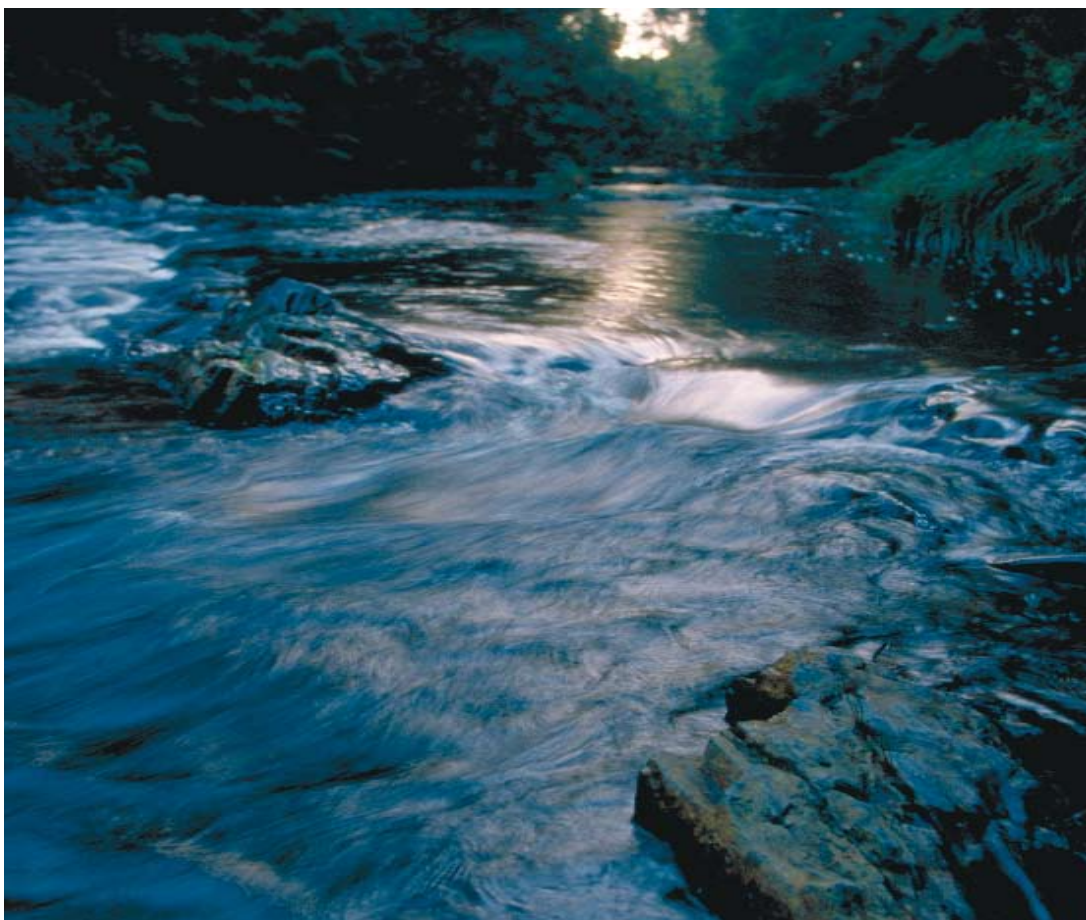
Incidents can include flooding, asset failures, pollution spills, major fires, fish kills and blue-green algae outbreaks.

Roles and responsibilities in relation to river and creek pollution incidents are detailed in an agreement between EPA Victoria, Parks Victoria and Melbourne Water. Roles and responsibilities for response to blue-green algae outbreaks are agreed with the Department of Sustainability and Environment.

Successful delivery of the service depends on having appropriate contingency plans and response protocols in place, regular refresher training for employees, and periodic testing of communications and other associated systems.

Performance Target	Incident response training will be provided for all personnel involved in incident management.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of completed training.

Performance Target	All incidents that require a response will be managed promptly and in accordance with Melbourne Water procedures.
Measurement	Performance will be assessed each year by reference to Melbourne Water's records of performance in responding to incidents.



Yarra River at Warburton

EVALUATION, REPORTING AND REVIEW



Worowa Primary School kids help protect the Yarra with drain stencilling activities.

This Operating Charter establishes a rivers and drainage blueprint for Melbourne Water management for the three-year life of Melbourne Water's Water Plan (2004/05 to 2007/08). The Board of Melbourne Water is accountable for our commitments to the aims and targets presented in this Operating Charter. To ensure we meet our commitments, the Board receives regular progress reports. In addition, we are committed to undertaking an annual report of performance against the commitments set out in this Charter. This is carried out by an independent auditor at the end of each financial year, and the results are published on Melbourne Water's website. Detailed records and compliance audit findings are subject to an annual overview by the Waterways and Drainage Advisory Committee.

The Essential Services Commission now regulates Melbourne Water, including the prices we charge for our rivers and drainage services. It also monitors our service commitments against targets detailed in our Water Plan. These targets are consistent with those represented in this Operating Charter. Melbourne Water's Water Plan is expected to be reviewed every three to five years to ensure funds are committed to, and spent on, priority projects. The next Water Plan will come into place in July 2008.

We also report and evaluate our performance against the Regional Catchment Strategy and draft Regional River Health Strategy every year, to the Board of Melbourne Water and the Department of Sustainability and Environment.

CONTACT US

For further information, please visit our website: melbournewater.com.au or call us on 131 722.

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APPENDIX – REGULATORY AND LEGISLATIVE FRAMEWORK

The Victorian Government's *Our Water Our Future* action plan (released in June 2004 and formally gazetted in November 2005) extended Melbourne Water's rivers and drainage boundary by almost 5000 square kilometres to cover the whole Port Phillip and Westernport region. It assigns Melbourne Water as the authority responsible for waterway, regional drainage and floodplain management in the region, as well as being the caretaker of river health.

The *Melbourne and Metropolitan Board of Works Act 1958* (part 10) gives Melbourne Water the authority to manage waterways and drainage services. The Act describes activities to be performed by Melbourne Water including drainage and river improvement works, and defines the area in which we operate.

The *Water Act 1989* (Part 10, D4) further defines functions conferred on Melbourne Water relating to drainage, waterways, floodplain management and diversions of water from rivers and creeks.

The *Planning and Environment Act 1987* (clause 55) requires the referral of applications related to subdivisions or overlays of interest to Melbourne Water.

In addition to these specific legislative powers, there are several obligations relating to the management of waterways and drainage that apply to all who operate these functions in Victoria.

The *Environment Protection Act 1970* provides principles for environmental protection, State Environment Protection Policies, industrial waste policies, scheduling premises, licensing and/or works approvals. These instruments impose various conditions, objectives, improvement actions and monitoring for compliance that are relevant to waterway management including water quality and environmental flows.

At a Commonwealth level, relevant obligations under the *Environment Protection and Biodiversity Conservation Act 1999* relate to matters of national significance including lists of species, communities requiring protection and processes that threaten flora/fauna.



Simone Gunn and
Jamie Ewert at
Hoddles Creek in
Launching Place

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