

Introduction

The Port Phillip and Westernport region contains about 8000 kilometres of rivers and creeks. These rivers and creeks are major assets that are highly valued by the community. The rivers and creeks are important reservoirs of biodiversity, providing valuable wildlife corridors. They are also a significant resource for urban and rural industry and thus have significant economic benefit for the region.

There has been significant improvement in river health in recent decades and there are some rivers and creeks in the region in excellent condition. However, nearly half are in poor or very poor condition and there is much work to be done.

The goal is to ensure that the region's rivers and creeks are healthy, with increased numbers of native fish, platypus and plants. Our rivers and creeks will continue to be a hub for recreation and our communities will actively participate in improving their condition. By 2025, all natural rivers and creeks will be in good or better condition.

This Port Phillip and Westernport Regional River Health Strategy provides a five year blueprint for Melbourne Water, the Port Phillip and Westernport Catchment Management Authority (CMA), councils, community groups and environmental and industry associations to work together to improve our rivers and creeks. The strategy is an important part of the Port Phillip and Westernport Regional Catchment Strategy, which sets the framework for the overall coordination of natural resource.

A New Operating Area

In June 2004, the Victorian Government released its *Our Water Our Future* action plan to secure the State's water resources for the future. This action plan assigned Melbourne Water the caretaker of river health and gave Melbourne Water responsibility for waterway management, regional drainage and floodplain management, the management of the environmental water reserve, and water quality monitoring throughout the Port Phillip and Westernport region. In addition, Melbourne Water's rivers and drainage boundary was extended by almost 5000 square kilometres. This matches the Port Phillip and Westernport CMA area, which 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.

Until November 2005, no designated regional authority was responsible for managing rivers and drainage in parts of the Westernport, Werribee and Maribyrnong catchments. In those areas, it was up to the combined efforts of State agencies, councils, landowners, catchment management authorities and community groups to carry out local improvements. Under the new arrangements, Melbourne Water is now the regional drainage, waterways and floodplain manager for the entire region, and is responsible for river health, management and maintenance of regional drains as well as identifying and maintaining areas subject to flooding. These improvements in institutional arrangements will provide more consistent and co-ordinated delivery of waterway health programs.

Costs to Deliver

The estimated cost to deliver the Port Phillip and Westernport Regional River Health Strategy for the designated period of five years is \$218 million. On an annual basis, it is approximately, \$44 million.

The implementation of this strategy is the responsibility of Melbourne Water, in partnership with local community, the Port Phillip and Westernport CMA, local government and State Government agencies (Department of Sustainability and Environment, EPA Victoria and Department of Primary Industries).

The majority of funding to implement the strategy will come from Melbourne Water. Funding for Melbourne Water's program is reviewed by the Essential Services Commission (ESC) through a public process. The aim of the ESC review is to ensure that Melbourne Water expenditure on river health is justified and efficient. The ESC has approved \$85.4 million for managing river health and \$37.7 million for managing water quality which has been allocated in Melbourne Water's Water Plan for the period 2005/06 to 2007/08. This funding covers expenditure in the previous Melbourne Water area only. Levels of expenditure in our new areas will be investigated over the next two years as programs are reviewed with stakeholders and communities.

In addition to the funding required to implement this strategy, the recently released *Yarra River Action Plan* outlines a package of projects totalling around \$600 million to secure a healthier Yarra River. Of this, approximately \$550 million is to improve sewerage management and \$20 million has been allocated to tackling stormwater pollution.

Resources from State Government agencies, local government, groups and individuals will be directed to the areas of highest priority in the strategy. Specific references to funding levels in this strategy are for indicative purposes only. The level of government investment is contingent on budgets and government priorities.

Figure 1: Regional Planning Framework

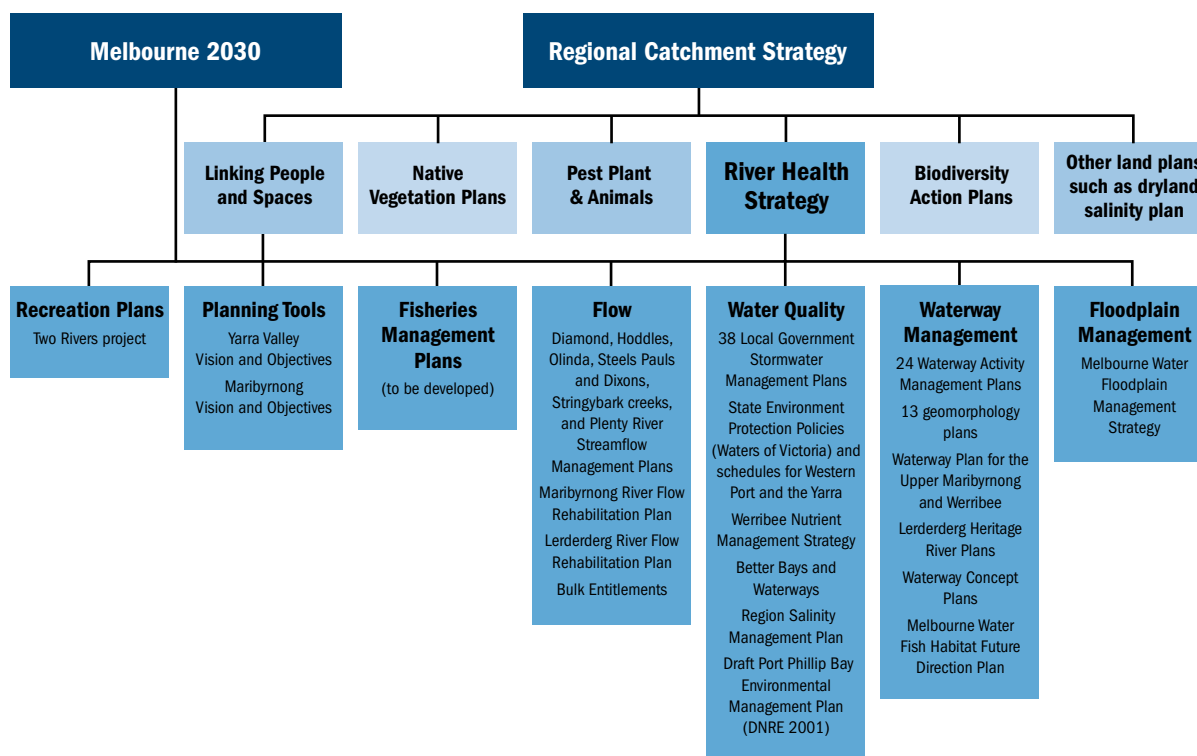
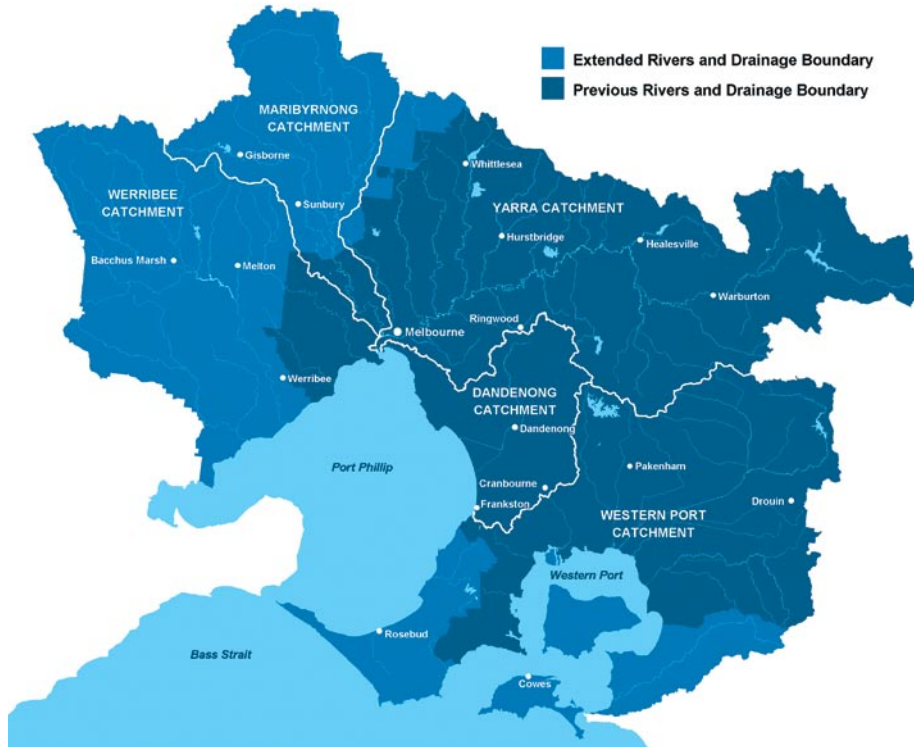


Figure 2: Melbourne Water's operating area



How the strategy was developed

This strategy has been developed using an asset valuation and risk-based approach through the Melbourne Water STREAMs decision support tool (see Appendix 1 and Resource CD for more detail).

Scales

The region has been divided into the five main catchments of Werribee, Maribyrnong, Yarra, Dandenong, and Westernport. These have been divided into 68 management units (referred to as rivers and creeks) centred on a major waterway or group of similar waterways. These have been further split into 178 smaller sub-management units.

Detailed information about these units can be obtained on the accompanying Resource CD. Please note that the river health programs in this strategy are summarised at the management unit scale.

Determining waterway condition

Waterway condition has been assessed according to Melbourne Water's Index of River Condition (IRC), which is designed to provide an overall integrated measure of the environmental condition of rivers. It is based on the Index of Stream Condition (ISC) developed by Department of Sustainability and Environment for rural rivers and creeks. The Department of Sustainability and Environment developed the ISC to provide an integrated measure of the environmental condition of the state of Victoria's rural rivers and creeks.

The IRC has been modified to account for the urban rivers and creeks in Melbourne Water's operating area and includes data for all of the rivers and creeks that Melbourne Water manages. It amalgamates information on the naturalness of the flow regime, water quality, condition of the channel and riparian zone, and the invertebrate communities living in the river.

The index contains five sub-indices and provides a summary of the extent of change from natural or ideal conditions for each of the sub-indices:

1. Hydrology or flows – how close to natural they are in terms of quantities and timing
2. Physical form – the condition of the waterway channel (bed and banks) and associated aquatic habitats
3. Streamside zone – the type and extent of vegetation along the waterway
4. Water quality – the physical and chemical characteristics of the water
5. Aquatic life – the makeup of the aquatic macroinvertebrate community.

Each sub-index is scored out of a maximum of 10, so that the overall score for the index will vary between a minimum of zero and a maximum of 50. River condition is then allocated to one of five classifications: very poor, poor, moderate, good or excellent.

Values

Values (also referred to as assets) are those features of rivers and creeks that we appreciate and want to protect, such as native fish and water quality. These values or assets were grouped into three categories:

- Environmental assets that reflect the rarity, naturalness and representativeness of rivers and creeks, and include features such as the presence of native fish and streamside vegetation
- Social assets that reflect the community's appreciation and use of waterways for recreation, landscape amenity and also European and Aboriginal heritage values
- Economic assets, which are an indirect measure of the financial contribution the rivers and creeks and includes, for example, tourism and provision of water supply.

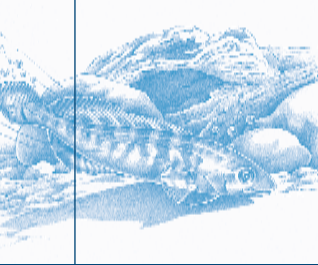
Threats

Threats are those activities or pressures that have the potential to degrade waterways and adversely affect river values described above. Threats included in the Port Phillip and Westernport region are largely based on those management issues identified in the Victorian River Health Strategy.

Risk assessment

Risk assessment provides a measure of the likelihood and consequences of a threat impacting on a value and the associated decline in the quality of river and creek assets that would result. For example, the likelihood of water quality deteriorating would have an associated impact on the health of the river and/or its suitability for recreation.

The risk assessment process involved identifying these assets and the threats that could lead to a deterioration in their condition. This information was then used, along with additional information on the relationship between the asset and threat, to determine what the risk was, and then develop suitable programmes to help minimise such risks (see Resource CD).



Prioritisation

Every river and creek within the region has value and supports a range of assets.

It is not feasible to manage all rivers and undertake all required improvement works within the five-year time frame of this plan. Therefore a prioritisation process is needed to determine which of these rivers and creeks are a priority and the river health programs to be implemented. This prioritisation process will also ensure that the associated expenditure is justified and efficient.

The process adopted in this strategy is based on the Victorian River Health Strategy (NRE 2002). It is designed to ensure the protection of existing high-value rivers and creeks that are in good condition and improve rivers and creeks in areas where there is:

- The highest environmental and community gain for the resources invested
- Community commitment towards long-term improvement of river health.

The prioritisation involved three steps.

Step one – determining regional importance

Step one involved determining the importance of each river and creek in the regional context using the values and risk ratings (refer to Resource CD and Appendix 3 for method and results).

A river or creek was assigned a “very high” regional importance rating if all three values (social, environmental and economic) were assessed as very high or high. A river or creek was also regarded as having “very high” regional importance if it was a Heritage River or Representative River. A river or creek was assigned a “high” regional importance rating if it had a high value rating and corresponding high risk rating. Rivers and creeks with a “moderate” importance rating are those rivers and creeks with a high value rating and corresponding moderate risk rating.

Step two – prioritise actions

Each action identified during the risk assessment process was prioritised according to:

- Degree of public perception/support
- Opportunity to improve river health
- Multiple benefits
- Return of investment
- Downstream benefits
- Link to regional importance rating (see step one).

(Refer to Appendix 4 to see how each of the criteria were scored to enable a priority for the action to be determined).

Step three – prioritise timeframes

The timeframes for implementation were determined by the following:

- Results of step one (the regional importance rating) and step two (action priorities) were used to determine the timeframes for the implementation of the river health programs. All ‘very high’ priority actions and ‘high’ priority actions for improving river and creek vegetation form the basis of the five-year program.
- Rivers and creeks that have a moderate to low importance rating in the regional context are often highly valued locally by the community or feed into a highly valued downstream environment such as a Ramsar site. These have been identified as priority because of their local community value. Therefore many rivers and creeks that have a moderate to low importance in the regional context can become a priority and thus can also be included in the five year program in conjunction with regionally important rivers and creeks.



Yarra River in Melbourne.

Consultation

This strategy has been developed in consultation with a range of stakeholders and community representatives. Consultation involved establishing a multi-stakeholder steering committee to provide direction on the development of the strategy, and the establishment of a working group to undertake the technical tasks associated with developing the strategy. Melbourne Water's Waterways Advisory Committee also provided valuable input. In addition, a total of 13 facilitated workshops were held throughout the region with a range of stakeholders and community representatives to identify values, risks and determine priorities. Input from Aboriginal communities with links to the Port Phillip and Westernport region was also sought.

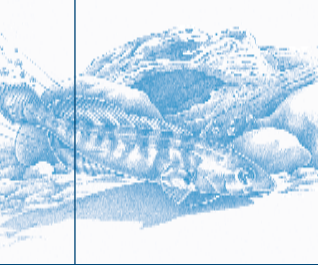
The draft strategy was then made available for public comment, and a further series of workshops were held with agencies, local government and the local community.

Refer to Appendix 2 and Section 2 of the Resource CD for a summary of workshops and a detailed analysis of public comments.

Information for each river and creek in this strategy

The table below provides an overview of the detailed information for each river and creek contained within this strategy.

Regional Importance	Rating of the river and creeks level of importance in the regional context. See Appendix 3 for the criteria used to determine importance.
Management Objective	Statement of the key objectives for each river and creek.
Current Condition	Current environmental condition of the river and creek as measured by the Index of River Condition.
Current Social Value	Current social value rating (see section 2 of the Resource CD for method used to determine the value rating).
Target	Predicted long-term environmental condition of each river and creek based on the effective implementation of the river health programs outlined in the strategy. Predicted social value rating of each river and creek based on the effective implementation of the river health program outlined in the strategy.
Description	A short description of each river and creeks values and an overview of key risks to these values.
River Health Program	An overview of the five-year river health program for rivers and creeks.



Managing River Health

Who does what

In the *Our Water Our Future* action plan, the State Government outlined its vision for the management of all waterways within the Port Phillip and Westernport region. Melbourne Water was assigned as the caretaker of river health and was given responsibility for waterway management, regional drainage and floodplain management, the management of the environmental water reserve, and water quality monitoring throughout the region.

In this role, Melbourne Water is accountable for protecting and enhancing the environmental, social and economic values of our rivers and also for showing leadership in the management of rivers, from the source to sea, in a way that recognises the impact of catchment activities on river health. To facilitate this process, an agreement has been established between Melbourne Water and the Port Phillip and Westernport CMA. Under this agreement, Melbourne Water delivers waterway, floodplain and drainage management while the Port Phillip and Westernport CMA provides strategic planning and priority setting to ensure an integrated approach to catchment issues and their management.

Melbourne Water, as the caretaker of river health, is responsible for implementing the bulk of the actions identified in this strategy. Detailed responsibilities for other agencies are contained within the attached Resource CD. The goals, targets and actions proposed in this strategy could not be realised without the help and assistance of multiple stakeholders, community groups such as Landcare and 'Friends of', and interested individuals who have come to value the rivers and creeks in our region. The community provides a considerable resource in terms of knowledge, skills, services and funds, and are regarded as fundamental to the effective management of our catchments. Melbourne Water acknowledges the importance of understanding local community values in respective catchment areas, and the sharing of information with the community and other interested parties.

Organisation	Key roles and responsibilities	Contact details
Melbourne Water	Caretaker of river health. Manages rivers and creeks, regional drainage network, drainage schemes and floodplains, monitoring programs, community education and support programs, and management environmental water reserve. Water resource manager, providing water and sewerage and recycled water services to retail water businesses.	Web: www.melbournewater.com.au Phone: 131 722
Port Phillip and Westernport Catchment Management Authority	Co-ordinates natural resources and catchment management.	Web: www.ppwcm.vic.gov.au Phone: 9785 0183
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. The Department also has a role as public land managers for State Forest and Crown Land in the region.	Web: www.dse.vic.gov.au Phone: 136 186
EPA Victoria	EPA Victoria is responsible for the protection of Victoria's environment. In relation to waterway health, EPA Victoria develops and oversees the implementation of State environment protection policies (SEPP) for the bays and catchments of the region, including water quality objectives; regulates discharges and enforces environmental protection conditions; prevents pollution; provides information to the public and operates a pollution 'hotline' service.	Web: www.epa.vic.gov.au Phone: 136 186
Local Councils	Local government are the local planning authority and have an important role to play in protecting river health. In addition, local government manage, local drainage networks, infrastructure, stormwater, and many have active programs for community grants and community education.	Web: www.mav.asn.au (Municipal Association of Victoria) Phone: 9667 5555

Organisation	Key roles and responsibilities	Contact details
Parks Victoria	Manages recreational and commercial boating along the Yarra and Maribyrnong rivers. Manages parklands within the region.	Web: www.parkweb.vic.gov.au Phone: 13 19 63
Department of Human Services	Provides health risk assessment and public health advice.	Web: www.dhs.vic.gov.au Phone: 1300 55 44 79
Department of Primary Industries	The department supports the agriculture, fisheries, petroleum, minerals, energy and forest industries in Victoria. DPI uses a collaborative approach to influence improvements in industry performance and to encourage the adoption of new technologies and development practices. The DPI does not have a specific regulatory role in water but has played a crucial role in providing advice to primary industries about the water reform agenda.	Web: www.dpi.vic.gov.au Phone: 136 186
Port of Melbourne Corporation	State-owned enterprise that manages land and water in the Yarra around the Port.	Web: www.portofmelbourne.com Phone: 9728 7555
Retail Water Companies (Yarra Valley Water, South East Water, City West Water)	Manage reticulated sewerage infrastructure in the region. Deliver backlog sewer program to replace septic tanks and manage small sewage treatment plants.	Web: www.yvw.com.au www.southeastwater.com.au www.citywestwater.com.au Phone: 131 721
Landholders and communities	Landholders, particularly those with river frontage, play a key role in managing streamside vegetation. Numerous community groups also volunteer substantial time, labour and expertise to protect, manage and improve rivers and riparian areas.	Contact your local council for information on community groups
Sustainability Victoria	Develops litter campaigns, programs and grants, responsible for waste management and recycling, plastic bags reduction program and grants.	Web: www.sustainability.vic.gov.au Phone: 1800 353 233

Where do I get further information?

For anything relating to the health of waterways, contact Melbourne Water as the caretaker of river health (131 722).

Water quality monitoring results are available from Melbourne Water's website at www.melbournewater.com.au/river_data

How can I help?

- Join a 'Friends of', Landcare or other community group. Contact the Port Phillip and Westernport CMA for details (www.pppwcma.vic.gov.au, 9785 0183)
- Contact your local council (www.mav.asn.au) or Melbourne Water (www.melbournewater.com.au)
- Become involved in a local Waterwatch group (www.vic.waterwatch.org.au; and www.melbournewater.com.au/waterwatch)
- Go to the Melbourne Water and *Our Yarra* website (www.melbournewater.com.au/ouryarra)

People can help reduce litter and pollution running into the rivers and creeks by:

- Washing their car on the lawn
- Putting dogs droppings into bins
- Rinsing painting equipment in the garden, not the gutter
- Securing bin litter so it can't blow away

Also, you can report activities that adversely impact upon the health of waterways:

- To report a pollution incident, contact EPA Victoria (1800 444 004)
- To report illegal connections (stormwater/sewerage) contact your local council

Other useful information is available from:

www.dse.vic.gov.au/riverhealth www.dse.vic.gov.au/waterdata/
www.epa.vic.gov.au www.pppwcma.vic.gov.au