The Victorian Government’s response
to the Environment and Natural Resources Committee’s
Inquiry into Melbourne’s Future Water Supply
Foreword


Securing the future of Melbourne’s and Victoria’s water supply is a top priority for the Victorian Government. Water is essential for the long-term economic future of the State, as well as the health of the environment and well-being of communities. The water situation in Victoria has changed. The reduction in rainfall and runoff observed over the past 12 years, and 2006 in particular, has required a change in the basis of water planning. The impacts of prolonged drought and climate change, as well as Melbourne’s growing population, mean that Melbourne can no longer simply rely on ongoing, steady rainfall as a basis for securing future water supplies.

Over the past 12 years, the Government has responded to this challenge by putting in place a robust, yet adaptive policy platform supported by a mix of large-scale infrastructure investments, initiatives and actions. In 2004, the Government released the *Our Water Our Future* White Paper, a 50-year State wide plan to manage water sustainably. The plan has since been complemented by the *Central Region Sustainable Water Strategy* (CRSWS) and, in response to the record low inflows of 2006, *The Next Stage of the Government’s Water Plan* was released in 2007.

Combined, these policies and actions set out a multi-faceted strategy, characterised by:

- Continued water conservation and efficiency measures for individuals and industry;
- Promotion of recycled water and stormwater where a net community benefit exists and detrimental discharges to the environment can be minimised;
- Investment in large-scale water supply augmentations;
- Increasing interconnections between supply sources across the State;
- Recognition and enhancement of the State’s Environmental Water Reserve;
- Pricing reform via the independent regulation of the water industry by the Essential Services Commission and improvements to the pricing tariff structure; and
- A comprehensive water management planning regime – including Statewide resource assessments, Regional Sustainable Water Strategies, regulatory plans, water corporation Water Supply and Demand Strategies, Drought Response Plans and catchment management strategies.

While there is uncertainty about the precise pattern of future rainfall, what is certain is that a diversified and multi-faceted water management strategy remains essential to securing Victoria’s water supply.

Going forward, Melbourne and Victoria will benefit from the implementation of this water strategy – desalination and the Sugarloaf pipeline will increase water supplies, water efficient products will continue to be taken up, water restrictions will ease, irrigation infrastructure will be modernised, water savings will flow and the Environmental Water Reserve will be enhanced. However, we will need to continue to be careful about how we use water. This means maintaining our water efficient behaviours, continuing to be innovative in using stormwater and recycled water where
projects deliver net benefits and incorporating water sensitive urban design into open spaces and in the home, where practicable.

Essentially we need to consolidate our water efficient behaviours as part of everyday life now and into the future. The Victorian Government’s long-term water strategy will continue to encourage all Victorians to conserve water into the future, ensuring that the investments and augmentations being made in the water supply system are complemented fully by an ongoing commitment to efficient water use.

The Environment and Natural Resources Committee (ENRC) report has recommended a range of policies and programs to provide for future water security. The recommendations cover issues such as water conservation and efficiency, alternative water sources, groundwater and desalination.

The Victorian Government has expressed its position in the following terms:

- **Support**: indicates that the Victorian Government agrees with the Committee’s recommendation. (The implementation of any recommendation that the Victorian Government supports is necessarily dependent on the availability of resources to support such outcomes.)
- **Support in principle**: indicates that the Victorian Government agrees with the intent of the recommendation, but not necessarily with the complete recommendation including the method proposed by ENRC for achieving that outcome.
- **Requires further Victorian Government examination**: indicates that a further examination of the issues is required by the Victorian Government.
- **Do not support**: indicates that the Victorian Government supports neither the intent nor the specifics of the recommendation.

The Victorian Government thanks the ENRC for its report, and individuals, industry and other stakeholder groups for their contributions to the Inquiry in both written and oral submissions. State Government agencies and their officers have also supported the Inquiry through submissions and providing evidence at hearings.
Recommendation 3.1

Water conservation and efficiency be maintained as the top priority in water management.

Support

The Victorian Government is committed to maintaining water conservation and efficiency as a fundamental component of its multi-faceted action plan to secure Melbourne’s water supply.

In 2004, the Government released the Our Water Our Future White Paper, a 50-year State wide plan to manage water sustainably. The plan has since been complemented by the Central Region Sustainable Water Strategy (CRSWS) and, due to record low inflows in 2006, The Next Stage of the Government’s Water Plan was released in 2007.

Combined, these policies and actions set out a multi-faceted strategy, characterised by:

- Continued water conservation and efficiency measures for individuals and industry;
- Promotion of recycled water and stormwater where a net community benefit exists and detrimental discharges to the environment can be minimised;
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- Pricing reform via the independent regulation of the water industry by the Essential Services Commission and improvements to the pricing tariff structure; and
- A comprehensive water management planning regime – including Statewide resources assessments, Regional Sustainable Water Strategies, regulatory plans, water corporation Water Supply and Demand Strategies, Drought Response Plans and catchment management strategies.

The Government will continue to encourage all Victorians to conserve water into the future, ensuring that the investments and augmentations being made in the water supply system are complemented by an ongoing commitment to efficient water use.

Melbourne water users have made outstanding progress over the past decade in saving water. The long-term water conservation targets set out in the Central Region Sustainable Water Strategy are currently being met, and indeed exceeded, with each Melburnian consuming on average 38.1 per cent less water in 2008-09 than in the 1990s (this is made up of a 35.8 per cent reduction in residential consumption, and 41.1 per cent in non-residential consumption). However, the effort needs to be continued, as sustainable water use will always underpin our future water security.

The Government aims to lock in the water conservation efforts of recent years. To this end, beyond simply encouraging water conservation for the short term, the Government is dedicated to supporting people in their efforts to continue to use water efficiently, over the long term. This action is being achieved by way of Permanent
Water Savings Rules, rebates, water efficiency regulation and greater education, information and awareness for customers, all of which assist in raising awareness of water use and embedding long-term behavioural change.

The Government is committed to helping Victorian towns and cities come off water restrictions. Importantly however, Our Water Our Future identified the need for Permanent Water Saving Rules. These measures are designed to encourage sustainable water use into the future. Behavioural change cannot, however, be achieved through rules alone.

The Water Smart Gardens and Homes Rebate Scheme helps people to make choices about efficient water use. This scheme provides households with financial assistance to install efficient water products. Hundreds of thousands of households are installing rainwater tanks, dual flush toilets and greywater systems, all of which represent significant household investments, but which can produce substantial water savings over the long term.

These measures are being implemented in concert with education and awareness campaigns, which seek to bring about long-term behavioural change in water users. The Government’s Target 155 campaign seeks to inform the community about the importance of water efficiency, as well as offering practical water saving solutions.

Pricing reform has been undertaken to ensure water prices better reflect the value of water and to provide appropriate incentives to drive behaviour change. Examples include recent changes to increase the volumetric proportion of water bills so people are rewarded for conservation efforts.

Households are being further encouraged to use water wisely through improved planning and design frameworks. As of May 2008, all new and renovated homes are required to meet a 5 Star building efficiency standard, which means greater energy and water efficiency through innovative housing design. Changes made in 2006 to clause 56 of the Victorian Planning Provisions mean that new developments must meet best practice guidelines for water sensitive urban design. As such local councils are looking more towards effective water management regimes and performance standards. Improved design guarantees that efficient and sustainable water use is locked in as a long-term measure.

**Recommendation 3.2**

Current water conservation and efficiency funding, programs and initiatives such as behavioural change programs, water pricing, incentives and regulation be expanded.

**Support in Principle**

The Victorian Government is dedicated to supporting people in their effort to continue to use water efficiently, over the short and long term. The Government will review its range of programs, nearing their completion, to ensure an effective mix of conservation and efficiency programs that continue to provide a net benefit to the community.
It is important that this future consideration by Government takes into account demand behaviours and supply side factors such as climate change, future inflow levels into our storages, the completion of major augmentations and behavioural responses to pricing reform and water efficiency measures. There is also inevitably a budgetary cost associated with water conservation and efficiency programs. It is therefore appropriate for the Government to continue to monitor the programs’ effectiveness to ensure that the investment represents value for Victorians.

The Government has many funds, programs and initiatives in place across both the residential and non-residential sector that encourage behavioural change to ensure water is used efficiently. These programs, outlined below, will be reviewed nearing their completion.

Current programs and initiatives in the residential sector include:

- Permanent Water Saving Rules;
- Water Smart Gardens and Homes Rebate Scheme, which has delivered 264,148 rebates since it started in 2003, providing estimated water savings of 2.67 billion litres per year;
- The Showerhead Exchange Program, which has exchanged over 350,000 showerheads in the Melbourne area, providing estimated savings of 4 billion litres per year;
- Target 155, which has saved 16 billion litres in the first 12 months, in addition to savings from Stage 3a water restrictions;
- Education and awareness campaigns, seeking a change in behaviour towards sustainable water use through brochures, DVDs and advertisements;
- The National Water Efficient Labelling Scheme (WELS), which the Federal Government is considering expanding to include more products, as well as minimum efficiency standards for toilets, taps and showers;
- Five Star building regulations; and
- The Energy and Water Task Force, which provides free water efficiency upgrades in disadvantaged neighbourhoods (see response to Recommendation 3.16).

Current programs and initiatives in the non-residential sector (which includes commercial entities, industries and institutions) include:

- The Schools Water Efficiency Program (SWEP), which has achieved savings in the order of 275 million litres per year;
- Water Management Action Plans (WaterMAP), which have achieved savings of 15 billion litres since the program commenced in 2007;
- Support 155, a voluntary program encouraging water efficient behaviour among businesses, which at this stage over has over 3,500 participating businesses;
- The Greening Our Hospitals (Water) program which is estimated to have saved 237 million litres of water per year to date, since its commencement in 2006 (with further reductions due by the completion of the program, June 2011); and
- Environment and Resource Efficiency Plans (EREP), which are administered by the Environment Protection Authority (EPA).

Other targeted programs in place that encourage behavioural change and aim to provide a greater awareness of water usage trends among residential and non-residential users include:
- The Water Smart Behaviour Change Program (residential sector)
- Top 200 Smart Water Metering Program (non-residential sector)

**Recommendation 3.3**

Having met the water conservation and efficiency targets in the Central Region Sustainable Water Strategy, the Victorian Government develop more ambitious targets to demonstrate its ongoing commitment to water conservation and efficiency and continuous improvement.

**Requires further Victorian Government examination**

The targets set in the CRSWS are currently being exceeded in large part due to Stage 3a water restrictions, which were introduced to Melbourne in 2007, and the Target 155 campaign to reduce household per capita consumption, which began in November 2008. These severe restrictions on consumption are a temporary drought response to low storage levels while the major augmentation projects are being built, such as the desalination plant (the Government has announced that water restrictions will ease to Stage 3 in Melbourne due to investment in major water projects, water-saving efforts by households and rainfall).

Therefore, current consumption levels are not a true measure of what per capita water consumption should be over time, following climate change. It is important to understand that the CRSWS targets are long-term targets and seek to maintain a sustained level of efficient water use in residential and non-residential sectors. The targets aim to reduce total per capita water use by at least 25 per cent compared to the 1990 average in 2015 and 30 per cent in 2020.

The CRSWS is due to be reviewed within seven to 10 years of its release. (This review is in accordance with requirements in the Water Act 1989.) In the meantime, while water restrictions are in place, the Government will continue to monitor water conservation and efficiency measures in the context of climate change, future inflow levels into our storages and the completion of major augmentations. The use of targets or their strengthening will be addressed within the review of the CRSWS.

**Recommendation 3.4**

The Victorian Government and water authorities develop a detailed strategy (including funding commitments for specific programs and initiatives) for the continuation of water conservation and efficiency efforts to counter the possible increase in water use following major supply augmentations.

**Support in Principle**

The Victorian Government will continue to encourage all Victorians to conserve water into the future, so as to ensure that the supply augmentations being made are complemented by an ongoing commitment to efficient water use.
It will take time to determine how much of our current water conservation efforts reflect a short-term response to water restrictions and/or a long term change in water use behaviour. With the easing of water restrictions, the Government’s long-term water strategy will continue to support people to achieve greater water efficiency.

The Government’s *Our Water Our Future* White Paper and the CRSWS outline a detailed strategy to manage demand in Melbourne (and Victoria) over the long term. The package of initiatives as outlined in the response to Recommendation 3.2 has measures specifically designed to support people in their efforts to use water efficiently over the long term. For example, the Government’s rebate program assists people to switch to water efficient fixtures and appliances within and outside their homes that will continue to be used regardless of augmentation.

The Melbourne water corporations recognise the need for a long-term approach to water conservation across all of Melbourne and continuously monitor their water efficiency measures. The corporations are committed to water efficiency and their proposals for water conservation for the next four years are detailed in their 2009-2013 Water Plans. The corporations’ Water Plans include expenditure over the next four years to support behavioral change programs, the WaterMAP program and many other conservation initiatives tailored to meet the customers’ needs.

The Government and Water corporations will continue to monitor and plan around demand responses via a range of required planning tools. Water corporations are required to complete regular Water Supply and Demand Strategies, Water Plans for pricing regulation and meet the Government’s Statement of Obligations.

**Recommendation 3.5**

As part of its water augmentation program, the Victorian Government continue to promote water conservation to avoid the historically large increases in household water consumption that have accompanied the delivery of ‘new’ supplies of water.

**Support**

The Victorian Government will continue to promote water conservation and efficiency as part of its comprehensive approach to securing Melbourne’s water supplies for the future.

In 2007, the Government released *Our Water Our Future: The Next Stage of the Government’s Water Plan* to provide the biggest boost to Victoria’s water supplies in 25 years. The Water Plan includes building a desalination plant in the Wonthaggi region, modernising irrigation infrastructure in northern Victoria, expanding the Victorian Water Grid and increasing the use of alternate water sources.

Supply augmentation is one part of the Government’s plan. Water conservation and efficiency remain keys to long-term and sustainable water use. Water conservation is important in the short-term, but the Government is also committed to helping people
implement water efficiency measures which produce savings over the long-term. The aim therefore is to promote long-term behaviour change, so that water savings made now can be expected to continue into the future, even after water supply augmentations are implemented.

It will take time to determine how much of our current water conservation efforts reflect a short-term response to water restrictions and/or a long-term change in water use behaviour. With the easing of water restrictions, the Government’s long-term water strategy will continue to support people to achieve greater water efficiency.

The Water Smart Gardens and Homes Rebate Scheme assists households to invest in water efficient products, such as rainwater tanks and greywater systems, which produce a water saving benefit over the long term. Improved planning and design frameworks contained in Clause 56 of the Victorian Planning Provisions promote water sensitive urban design. More effective water management regimes and performance standards help to lock in long-term efficiency and sustainable water use.

These measures are being implemented in concert with education and behaviour change campaigns. In November 2008, the Government launched the Target 155 program to help reduce residential water consumption. Since its inception, Target 155 has saved an estimated 17.5 billion litres as at 13 November 2009 compared to Stage 3a restrictions alone. The Government recognises that voluntary conservation efforts continue to make significant contributions to demand-side water savings. In the future, as storages recover and water restrictions ease, the focus will shift from water conservation to long-term water efficiency.

**Recommendation 3.6**

The Victorian Auditor-General conduct a performance audit of the present water restrictions regime including: its effectiveness in reducing water consumption, the equity of its application and the conditions for exemptions.

This is not a matter for the Victorian Government, but rather the Victorian Auditor-General.

There is a formal requirement for water corporations in Melbourne to review Drought Response Plans within 12 months after restrictions have been lifted.

Under the existing drought response arrangements for Melbourne, water corporations are required to develop Drought Response Plans. A major component of the plans is water restrictions, (see following recommendation).
The Drought Response Plan (DRP) Guidelines explain that a post-restrictions evaluation should:

- Review the effectiveness of the plan;
- Review any post-drought impacts on the supply system and whether these effects can be reduced in the future (such as increased sediment in inflows to storages resulting from post-drought rains);
- Identify any changes in consumer attitudes to water use, and consider whether reductions in demand can be sustained; and
- Identify whether any further investigations are necessary to allow refinement of the sequential plan of action

In the light of the above considerations, water corporations need to then:

- Decide whether any variations to the DRP are required; and
- Undertake any required public consultation on the proposed variations, consider the comments received, and submit the proposed variations to the Minister as required.

The Government will then consider the outcomes of the review and assess any proposed variations to the Drought Response Plans.

With this requirement in mind, a range of significant studies (e.g. National Water Commission, Smart Water Fund and industry-specific studies) have already been undertaken, or are currently in progress. These studies examine the effectiveness, associated impacts, costs and benefits of water restrictions, and customer attitudes (residential and non-residential) towards restrictions in the metropolitan Melbourne region. For example, the National Water Commission has recently released a “Review of Water Restrictions”, prepared by the Institute for Sustainable Futures. This review involved a detailed examination of the effectiveness, impacts, costs and benefits of both temporary and permanent water restrictions (up to August 2007) in metropolitan centres around the nation, including Melbourne. One conclusion was that water restrictions should be used as short-term emergency measures.

Together, this information will provide a comprehensive basis to underpin not only a review of future restriction policies but also to inform consideration of the appropriate role for temporary restrictions, and other drought response measures, in managing Melbourne’s water supplies. In the light of the availability of this detailed information and the review requirements already in place, it is not considered necessary to initiate an audit by the Auditor General (see also the Response to Recommendation 3.7).
Recommendation 3.7

The Victorian Government revise the Victorian Uniform Drought Water Restriction Guidelines to:

a) ensure greater equity in the application of water restrictions; and

b) include appropriate restrictions targeting discretionary water use in the non-residential sector.

Support in Principle

The Victorian Government supports a review of the Victorian Uniform Drought Water Restriction Guidelines. The Department of Sustainability and Environment, in conjunction with the Victorian water industry, will review the Victorian Uniform Drought Water Restriction Guidelines in the light of recent experience and determine an appropriate process for implementing a revised restriction schedule. The Government does not support a revision of the Guidelines in the absence of such a review.

As at the start of February 2010, 251 towns across Victoria were on water restrictions due to prolonged drought. In order to ensure ongoing compliance with these restrictions, the specifics of the measures must be clearly articulated and understood by the community, which requires that they be consistently applied for a reasonable period of time. It is therefore most appropriate to conduct a thorough review only after the restriction schedules are lifted in most locations throughout the State. This will ensure that the data which informs the review is sufficiently reliable and rigorous to lead to valuable conclusions.

The review will encompass a wide range of considerations including the issues referred to in (a) and (b) above. It will investigate the experience with, and principles for, exemptions, with a view to promoting greater consistency around the State in the future, where appropriate, and ensuring that the restrictions operate as an effective emergency measure.

The review will also be informed by the results of the studies referred to in the Response to Recommendation 3.6, and in the light of the experience of water corporations around the State with restrictions, as well as other conservation measures, including WaterMAP programs tailored to the non-residential sector.
Recommendation 3.8

The Victorian Government deliver the environmental flows contained in the Central Region Sustainable Water Strategy’s Environmental Water Reserve commitments as a matter of priority.

Support in Principle

The Victorian Government is committed to improving the health of Victoria’s rivers and recognises that healthy rivers are vital to securing Victoria’s water future. Record low inflows, however, have resulted in the Government having to ensure that there will be sufficient water to meet critical human needs.

Since 2004, the Government has contributed an average of $30 million annually to Catchment Management Authorities and Melbourne Water in order to improve river health. This investment is typically matched by community contributions, and further leveraged by Federal Government investment. This combined effort has supported the improvement of river and creek bank vegetation as well as activities to improve water quality and flow. In the 2009/10 financial year, Catchment Management Authorities will again receive more than $27 million from the Victorian Government to continue this work.

Today, Victoria faces extreme drought conditions. Record low inflows have resulted in the Government having to ensure that there will be sufficient water to meet critical human needs. Consequently there has been a delay in the implementation of environmental flow improvements in the Central Region and the Environmental Water Reserve has been qualified in several rivers in Victoria, including the Thomson River. However, securing water for the environment is still a Government priority and work is progressing.

The Environmental Water Reserve in the Thomson River was qualified in 2007, and again in 2009. In 2009, environmental flows in the Thomson River have been reduced as a temporary measure to assist in securing Melbourne’s water supply. The decision to reduce flows in the Thomson River was made following an environmental risk assessment (ERA) and development of appropriate arrangements to manage the identified risks. The ERA identified that there was a potential threat to Australian Grayling, a species listed under the Federal Environment Protection and Biodiversity Conservation Act 1999, through reduced spawning and migration opportunities and poor water quality. In response, a drought reserve has been established, which increases annually, and which will be released to provide spawning and migration flows for the Australian Grayling in response to flow triggers. The issue of water quality has been addressed through an emergency contingency plan for releases of water from storage in response to water quality triggers. Enhanced monitoring plans are in place to identify when emergency releases are required. As a result of the monitoring plans, the drought reserve and the emergency contingency plans, the risks to the Australian Grayling are considered manageable, and a reduction in flows of 8-10 billion litres was considered acceptable.
The Yarra River Environmental Entitlement (17,000 ML) and Bunyip River Environmental Entitlement (3,000 ML) were gazetted by the Minister for Water in 2006 and 2009 respectively. However, the use of this water has been delayed due to the need to maintain critical water supplies to Melbourne. The rivers are being monitored for environmental consequences and to date, emergency measures have not been required.

On 16 March 2010 new measures for stressed rivers were announced, including that 7 billion litres of water will be returned to the Yarra River and 3 billion litres of water will be returned to the Thomson River in environmental flows. The additional 3 billion litres for the Thomson River will be used for high flow freshes to provide additional spawning opportunities for Australian grayling. It is in addition to 3 billion litres already released to enhance the summer flows in 2010 and improve instream habitat availability over the low flow summer months. The 7 billion litres in the Yarra River will increase the number of freshening flows and improve instream habitat by reducing the risks of low dissolved oxygen levels and moving fine sediments. The 7 billion litres will also maintain a minimum flow below Yering that will improve instream habitat by reducing the risks of low dissolved oxygen levels and allow adequate depth of water over rock bars for fish movement.

A number of the commitments in the CRSWS state that following completion of major augmentations and subsequent improvements to security of supply, the Government will transfer part of a water corporation’s entitlement to the environment. Most of these augmentations are underway, and in some instances have been fast-tracked due to the extreme drought conditions. This means that the Government has more capacity to address critical human needs today, as well as being in a better position to deliver the committed environmental flows once supply conditions improve.

For example, the Government and Central Highlands Water completed the $180 million Ballarat Goldfields Superpipe in 2008. As water supply conditions improve for Ballarat, it will place the Government in a better position to return environmental flows to the Moorabool River. In June 2009 Melbourne Water reconnected Tarago Reservoir to the Melbourne supply system after building a new $97 million water quality treatment plant. This will also assist in enabling environmental flows to be provided to the Bunyip and Tarago Rivers. Barwon Water has progressed the development of the Anglesea groundwater borefield, which will enable enhanced environmental flows in the Barwon River, and planning for the Melbourne to Geelong interconnector. Further progress in achieving delivery of increased environmental flows across the region will occur when water supply security improves, and urban regions return to Stage 1 or Stage 2 water restrictions.

Other actions undertaken include the commencement of a seven-year research program on the Latrobe River by West Gippsland Catchment Management Authority (CMA), while Corangamite CMA has progressed the redirection of 3000 ML of groundwater discharges to the Moorabool River.

**Recommendation 3.9**

The Permanent Water Saving Rules be strengthened to reflect community attitudes regarding wasteful water use.
Support in principle

As part of the *Our Water Our Future* White Paper, Permanent Water Saving Rules (PWSR) were developed in order to ensure our water resources are used efficiently, by eliminating wasteful water use. These rules were developed in close consultation with the public and key industry groups to ensure that the responsibility for saving water is shared across the community, and that the rules were consistent with community attitudes.

Melburnians have responded well to the PWSR. It is estimated that an annual saving of around 2-3 per cent of average annual water consumption is achieved by implementing PWSR. However, the PWSR were only in place for 18 months before drought conditions meant that, on 1 September 2006, they were augmented with Stage 1 restrictions. (Stage 2 restrictions were in place three months later on 1 November 2006. Stage 3 commenced 1 January 2007. Stage 3a has been in place since April 2007 and will be in place until 2 April 2010, when it will ease to Stage 3.)

Given that water restrictions are now being eased in many Victorian communities, it would be appropriate to review the PWSR, having regard to current Government policy and the environmental, economic and social costs and benefits of any changes.

**Recommendation 3.10**

The Victorian Government consider the wider use of water offset arrangements to promote investment in long-term water savings.

**Requires further Victorian Government examination**

Water offset schemes have not been part of the Victorian Government’s water policy. Schemes promoted previously have not been satisfactory, equitable or transparent. We remain open to offset schemes that are suitable, equitable and transparent. Further consideration may be given to the design and appropriateness of suitable schemes for the future.

It is clear that water restrictions have had a significant impact upon community assets across Victoria, such as public sporting grounds, public gardens and street trees. This has reduced community amenity and social value and is most acutely having an effect in parts of northern and western Victoria, and in metropolitan Melbourne.

Local councils and other community water users may have access to a range of measures which allow for limited watering of community assets, such as exemptions to water restrictions, recycled water, stormwater harvesting and bore water. Nevertheless, such schemes may not always be economically, socially or environmentally viable.

The community expectation is for the Government to balance water savings objectives with fairness in applying water restrictions across the whole community. Therefore it would be important to design any water offsets scheme in such a way as to provide incentives for water savings investments that would not otherwise occur and which therefore ensure a net increase in water storages and a net benefit across the
community. Failure to do so would not only lead to poor conservation outcomes, but might also cause community concern that water restrictions were being applied inequitably.

**Recommendation 3.11**

The effectiveness and extent of water conservation behavioural change campaigns over the last decade be evaluated.

**Support**

The Victorian Government will evaluate the effectiveness and extent of behavioural change campaigns, both through ongoing monitoring as well as evaluation upon a program’s completion.

The *Our Water Our Future* (OWOF) Metropolitan Melbourne Behavioural Change Campaign commenced in 2003. It is a broad-scale awareness raising, knowledge building, attitude shifting and brand building campaign for water conservation. Over the past five years, it has evolved to also add community-based grass roots programs. These include water restrictions advertising; the ‘Water Learn it! Live it!’ education program for primary and secondary schools; and, the OWOF-accredited Water Saver Garden Centres. The OWOF campaign has been highly successful in raising the awareness for conservation and has had ongoing review and improvement since it commenced.

As mentioned in Recommendation 3.5, the Target 155 and Support 155 programs, which have been promoted extensively throughout Melbourne, aim to help reduce residential and non-residential water consumption. The Target 155 campaign has saved 16 billion litres in the first 12 months. The savings generated from these campaigns will continue to be monitored regularly by the Government to evaluate their effectiveness.

The Water Smart Behaviour Change Program, an initiative announced by the Victorian Government in 2007, is a voluntary behaviour change approach to reduce water consumption in the home. This program has built-in evaluation processes and is reviewed to support continuous improvement. The Program will be evaluated following its completion in 2010.

**Recommendation 3.12**

Individual daily water consumption targets be linked to each water restriction level, as is the case in south east Queensland.

**Support in Principle**
Target 155 was specifically selected to match the estimated per capita potable water use under Stage 4 water restrictions, without creating negative impacts on industries, such as the garden nursery and car wash industries, which would result from the total ban on outdoor water use under Stage 4.

Melbourne is currently on Stage 3a water restrictions, which have been in place since April 2007, and were designed specifically to balance water savings with the importance of protecting jobs, essential industries and public amenities. Target 155 was introduced in November 2008, as a means of facilitating further reductions in water use, by further encouraging, rather than mandating, water efficient behaviour.

Although the Government has announced that water restrictions will be eased to Stage 3 from 2 April 2010, Target 155 will remain in place to encourage households to continue saving water.

**Recommendation 3.13**

The Water Smart Gardens and Homes Rebate Scheme be extended to all products with a Water Efficient Labelling and Standards star rating of four or higher.

**Do Not Support**

The Victorian Government does not support this recommendation because the objectives of the two programs are different.

The Water Efficiency Labelling and Standards (WELS) is a Federal Government regulatory scheme, underpinned by product testing to Australian Standards. WELS products must carry a WELS label showing the water efficiency star rating and the water consumption or flow rate of the product. WELS products include taps (with some exceptions), showers, toilets, urinals, flow controllers (optional), clothes washing machines and dishwashers. The Federal Government is currently considering the expansion of the WELS scheme to include evaporative air conditioners, domestic irrigation controllers, and continuous flow water heaters. The scheme may also be further developed to mandate minimum efficiency standards for taps, showerheads and other water products.

The WELS scheme is designed to help people make informed decisions when they purchase water products, and to allow customers to make their own assessment as to the costs and benefits of their decisions.
Rebates, on the other hand, are provided when the objective is to change customer behaviour towards greater water efficiency and when there is a significant price barrier that prevents this. The specific objectives for the Rebate Scheme are to:

- Encourage improved water use efficiency throughout the home and garden and to change the way water is used in these areas in the short and long term;
- Reduce demand on Victoria’s urban water supply systems; and
- Increase community awareness of the importance of saving water around the house and garden.

Not all WELS products meet these objectives. It is therefore not appropriate to provide a rebate simply because a product has achieved a certain WELS rating. There are also substantial costs involved in such a move. Nevertheless, the Government continues to develop other means of encouraging water efficient behaviour, such as through education, voluntary programs and advertising campaigns.

**Recommendation 3.14**

Simple, low-cost water efficient fixtures (e.g. showerheads, flow restrictors, dual-flush toilets) become mandatory for existing houses and non-residential properties at the point of sale or lease.

**Requires Further Victorian Government Examination**

The Victorian Government supports the mix of current programs to upgrade existing properties with water efficient appliances (including rebates, water efficiency ratings, the Energy Saver Incentive, and audit and retrofit programs such as the Energy and Water Task Force) rather than mandatory measures.

Rating water efficiency features of dwellings at point of sale and lease is considered a more effective action to promote understanding of appropriate water efficiency upgrades for dwellings. This also allows for flexibility as to the timing of upgrades. The benefits of this approach are examined in the response to Recommendation 3.15.

There may be more scope for imposing minimum efficiency standards at the time of lease (rather than sale) for residential properties because there is currently no real financial incentive for the landlord or tenant to install water efficient fixtures. However, the Government would need to consider the benefits and costs of such a measure for all parties and the contribution to water savings.
**Recommendation 3.15**

The Victorian Government establish an environmental sustainability assessment and rating system which includes water efficiency. The system should be applied to all new, altered and existing housing types and non-residential buildings at the point of occupation, sale or lease.

**Support in Principle**

On 30 April 2009, the Council of Australian Governments (COAG) agreed to phase-in mandatory disclosure of residential building energy, greenhouse and water performance at the time of sale or lease, commencing with energy efficiency by May 2011, subject to a Regulatory Impact Assessment.

The Victorian Government is working closely with the Commonwealth, States and Territories to develop an effective national mandatory disclosure program.

Current programs and initiatives in the non-residential sector (which includes commercial entities, industries and institutions) include:

- The Schools Water Efficiency Program (SWEP), which has achieved savings of 275,655,000 litres per year;
- Water Management Action Plan (WaterMAP), which has achieved savings of 15 billion litres since the program commenced in 2007;
- Support 155, a voluntary program encouraging water efficient behaviour among businesses, which at this stage over has over 3,500 participating businesses;
- Environment and Resource Efficiency Plans (EREP), which are administered by the Environment Protection Authority (EPA).

**Recommendation 3.16**

The Victorian Government investigate ways in which the costs of performance-based standards for environmental sustainability, including water efficiency, can be offset for ‘affordable housing’.

**Support**

The Victorian Government will continue to investigate ways in which the costs of performance-based standards for environmental sustainability, including water efficiency, can be offset for ‘affordable housing’.

Minimising the cost of achieving environmental sustainability, including water efficiency, within residential dwellings is an important consideration. There are a range of existing programs that assist low income and disadvantaged households to reduce their water and energy use.
One such program is Sustainability Victoria’s Energy and Water Task Force. A joint initiative along with the Department of Human Services, Neighbourhood Renewal and the Department of Planning and Community Development, this program works with not-for-profit community organisations to provide free energy and water saving retrofits to low income and disadvantaged communities. In operation since 2003, it has provided retrofits free of charge to 4,700 low income households in over 25 areas. The partnership with Neighbourhood Renewal also means that members of the community who are unemployed or otherwise at risk are actively involved in working on the project, and develop skills and training while at the same time achieving environmental outcomes. The program is projected to retrofit a further 8,000 homes by the end of 2011.

The Department of Human Services is also continuing with its own Water Savings in Public Housing Project, in collaboration with the Department of Sustainability and Environment through the Government’s Victorian Water Trust. The program will install an estimated 37,300 AAA showerheads and more than 9000 dual flush toilets across the entire stock of public housing. Actual water saved will be evaluated following completion of the project in 2010-11. These are permanent upgrades and as such enable low income households to implement water efficient behaviours for the long-term.

Recommendation 3.17

The Victorian Government monitor and facilitate the development of new water efficient technologies and where practicable facilitate research and development and implement pilot or demonstration projects that support the development process.

Support

The Victorian Government is monitoring and facilitating the development of new water efficient technologies through its existing programs such as Victorian Water Trust, Stormwater and Urban Recycling Fund, INNOVIC, and Melbourne’s water corporations’ Smart Water Fund.

The Government has committed $320 million over a 10-year period to 2013, through the Victorian Water Trust (VWT). This provides a long-term, stable source of funding for new investment in Victoria’s water resources. A key objective is to stimulate innovation in technology, people, ideas and knowledge. Many projects funded through the VWT involve trials of new technologies and procedures to improve water use. For example, a $2 million investment in Strategic Research Initiatives to support water conservation and recycling and the Water Savings in Public Housing Project.

City West Water, South East Water, Yarra Valley Water and Melbourne Water established the Smart Water Fund in 2002. The Smart Water Fund has invested $28 million in over 170 innovative water conservation, water recycling and biosolids management projects in the first six rounds since the fund was established. Round 7 of the scheme will be launched in late 2009. The key areas of focus for these projects include: scientific activities (36 per cent); engineering activities (43 per cent);
social/behavioural change or educational initiatives (48 per cent); and economic based activities (24 per cent).

In 2004, the Government also invested $10 million in the Stormwater and Urban Conservation Fund. This funded 66 projects which reduced potable water use through innovative stormwater management strategies. Another $10 million has been invested through the Stormwater and Urban Recycling Fund. The second round of this funding is due to be announced soon.

Victoria also participates in the national Water Efficiency Labelling and Standards scheme and the Smart Approved Watermark scheme which provide frameworks for recognition and accreditation of performance. New products and initiatives, including innovative water efficiency projects, are also supported through INNOVIC, which promotes the practical development of innovation, by educating and assisting early stage innovators and small businesses, helping to develop and commercialise viable new products and technologies.

### Recommendation 3.18

The Water Smart Gardens and Homes Rebate Scheme be extended to include a greater range of water efficient and water conservation products, for example front loading washing machines.

### Support in Principle

The Victorian Government will maintain the design of its Water Smart Gardens and Homes Rebate Scheme, which has recently been extended until June 2011. Any future change to the scheme would need to consider the program’s multiple objectives and relevant budgetary constraints.

The rebate scheme is designed to encourage improved water use efficiency in the short and long term, to reduce demand on urban water supplies and increase community awareness of the importance of saving water. The $30 million Rebate Scheme has saved an estimated 2.4 billion litres of water per year, since its commencement in 2003.

Regular reviews are undertaken to ensure that the most appropriate products are included to achieve this objective. The Scheme has been extremely successful in helping to change the purchasing behaviour of Victorians. Rebates for washing machines have been provided in the past; most recently Sustainability Victoria provided rebates for a short time during June 2009. (This scheme was designed to raise awareness of the importance of water conservation.) Market research now shows that consumers are now more aware of the benefits, and that purchases of water efficient washing machines have overtaken other types of washing machines. Testament to the success of the Rebates Scheme, the need for a rebate on washing machines (relative to other products) has been removed.
**Recommendation 3.19**

The rebate paid under the Water Smart Gardens and Homes Rebate Scheme be directly linked to a product’s water efficiency or potential water savings.

**Support in Principle**

The Victorian Government’s Water Smart Gardens and Homes Rebate Scheme has three objectives, one of which is improved water use efficiency. The extent to which the rebate paid under the Scheme is linked to a product’s water efficiency or potential water savings is guided by the interplay between the water efficiency objective and the other Scheme objectives (reducing demand on Victoria’s urban water supply systems, encouraging urban water customers to implement more sustainable water use and increasing community awareness of the importance of saving water around the house and garden.)

The Water Smart Gardens and Homes Rebate Scheme is reviewed on a regular basis to assess the benefits and costs of the rebates. The scheme was recently reviewed prior to the final two years of the four-year program. The program will maintain its current rebate rates. It is important to note that price does not necessarily increase with water efficiency and if a graduated rebate was available this may just increase the price of the more efficient appliances by the amount of the rebate.

**Recommendation 3.20**

The Victorian Government monitor the ongoing effectiveness of the Showerhead Exchange Program and consider moving to a more proactive (e.g. offering free door-to-door retrofits) or mandatory roll out of the program.

**Support in Principle**

Melbourne’s water corporations will continue to review the effectiveness of the Showerhead Exchange program.

The Showerhead Exchange Program is administered and funded by Melbourne’s water corporations as part of their ongoing water conservation activities. The corporations have used a variety of methods to reach both residential and non-residential customers including the establishment of contact points in shopping centres, community centres and council offices.

There have been over 350,000 showerheads exchanged in the Melbourne area with estimated savings of about 4 billion litres per year.

While the Showerhead Exchange Program has been successful in encouraging customers to conserve water, in many households and commercial sites it is unnecessary to install water efficient showerheads. For example, households with gravity feed hot water systems operate on low pressure flow rates, thus achieving a similar objective to water efficient showerheads.
As many households cannot be fitted with water efficient showerheads there is no intention at this stage to make the showerheads mandatory. However, Melbourne’s water corporations will continue to review the effectiveness of the program along with ways to better target a wide range of customers.

In recognition of this fact, the Showerhead Exchange Program is further complemented by other behaviour change programs, such as the Target 155 campaign’s broad advertising strategy designed to encourage people to reduce shower times.

**Recommendation 3.21**

The Victorian Government mandate the use of pool covers for all outdoor domestic pools.

**Do Not Support**

The Victorian Government does not support mandating pool covers for all outdoor domestic pools.

While the Government agrees that pool covers can potentially save water lost to evaporation, other tools can be used to encourage pool owners to make this investment. Regulation in this environment is likely to be complex, particularly to ensure an effective compliance and enforcement regime. It would then be questionable as to whether the overall benefit would warrant the burden of additional regulation.

The water savings benefits of pool covers will vary greatly due to both design and use. The Government encourages pool owners to install and use an appropriate cover to reduce water loss and each individual pool may have a number of effective options available. For example, pool owners are encouraged to consider purchasing a pool cover, via Victoria’s participation in the Smart Approved Watermark scheme which provides an accreditation for water saving pool covers. The Smart Approved Watermark website (www.smartwatermark.info) lists nearly 40 approved pool cover products and provides information on their performance and application. Encouraging the use of this information, to help pool owners find a product that meets their particular needs and to maximise water efficiency, is considered a better alternative to regulation.
Recommendation 3.22

The Victorian Government consider alternative financial incentive models, such as green loans, to further encourage water conservation and efficiency.

Support in Principle

The Victorian Government and Melbourne’s water authorities continue to provide a range of funding options and incentive methods to further encourage water conservation and efficiency among Melbourne’s water users. For example, South East Water offers a program which provides interest-free loans for customers to install rainwater tanks. The program, in operation since May 2009, allows customers to choose a payment plan over a 12 or 24-month period, as a means of assisting more households to invest in water efficiency.

Additionally, the Water Smart Gardens and Homes rebate scheme assists households in saving water by providing rebates for a range of products including water efficient showerheads, upgrades to dual flush toilets, green products, rainwater tanks and greywater systems.

As with all new initiatives, the costs and benefits of potential programs would need to be assessed within relevant budget processes.

Recommendation 3.23

The Victorian Government and water authorities develop a strategy to encourage water conservation and efficiency in the non-residential sector, especially for small to medium sized water users.

Support

The Victorian Government is already implementing a strategy to encourage water conservation in the non-residential sector.

A part of the Victorian Government’s efforts to encourage water efficiency in the non-residential sector, customers who use more than 10 million litres of potable water per year are required to develop a Water Management Action Plan (WaterMAP). The work undertaken with the non-residential sector is reflected in Melbourne’s non-residential sector using around 41 per cent less water in 2008-09 compared to 1990s averages.

The Support 155 program encourages water conservation and efficiency among all non-residential water users, particularly small to medium sized enterprises and customers that use less than 10 million litres of water a year. The program encourages these customers to assess their water use and develop actions to use water more efficiently.
Recommendation 3.24

The Victorian Government extend the eligibility of the Water Smart Gardens and Homes Rebate Scheme to non-residential water users.

Do Not Support

The Victorian Government does not support this recommendation as the Water Smart Gardens and Homes Rebate Scheme has been set up specifically for residential customers. Residential users are excellent candidates for such a scheme because residential water use is similar across all households.

Water use by business and industry, by contrast, varies widely. Programs to assist non-residential customers need to be able to target the specific water saving actions of each individual business or sector. Thus, any program for non-residential water users needs to be tailored to the particular industry, and therefore must be separate from the residential program.

The Victorian Government has various programs in place to encourage water conservation and efficiency among non-residential customers (see Recommendation 3.2). The Melbourne water retailers assist their WaterMAP customers to invest in water saving infrastructure, an approach which has the advantage of being especially tailored to the individual needs of the customer. This program offers a broad range of specialised support services, ranging from grant funding through to expert advice. Non-residential users can also already access the free showerhead exchange program.

Recommendation 3.25

The Essential Services Commission and water retailers agree to responsibly increase water consumption charges to reflect the full environmental, social and economic costs of water.

Support in Principle

The Victorian Government’s water pricing policy has many objectives:

- To ensure prices recover the cost of a delivering the full range of water services, including environmental, social and economic costs, where practical;
- Structuring water prices to reward water conservation;
- Protecting the long-term interests of customers; and
- Providing fair and equitable concession arrangements to ensure affordability of water and sewerage services for pensioners and vulnerable Victorian households.

Water prices in Victoria are set by the independent economic regulator, the Essential Services Commission. The Commission's primary objective under the Essential Services Commission Act 2001 is to protect the long-term interests of Victorian households.
consumers with regard to the price, quality and reliability of essential services. Prices are approved on the basis of reflecting the cost of providing water and sewerage services. The price-setting process is a transparent process that encourages public consultation and participation. The ESC is also tasked with periodic review of water tariffs to ensure that they continue to meet economic, social and environmental objectives.

The Victorian Government is a signatory to the National Water Initiative which, among other objectives, seeks best practice water pricing and institutional arrangements to promote the economically efficient and sustainable use of water resources. This includes full-cost recovery for water services to ensure business viability, avoidance of monopoly rents and recovery of environmental externalities, where practical. The Government is also aware of the importance of balancing these objectives with the need to ensure that water and sewerage services remain affordable.

**Recommendation 3.26**

The Victorian Government ensure an adequate safety net and water conservation assistance for:
(a) low income households to help manage the forthcoming water price increases; and
(b) larger households who have made reasonable water conservation efforts yet consistently face water charges at the highest tariff

**Support**

The Victorian Government is committed to fair and equitable concession arrangements that ensure the affordability of water and sewerage services for pensioners and vulnerable Victorian households.

The Government recognises that some customers may require assistance paying their water bills. In 2008/09 the Government announced a 14.8 per cent increase in water concessions to pensioners and health care card holders and, for the financial year 2009/10, concessions have been increased by a further 14.18 per cent.

In addition, water corporations are required to have financial hardship policies which must include processes, information and payment options available to customers. The Government will continue to monitor its concessions policy to ensure that it provides an adequate safety net.

This policy is further complemented by support programs such as Sustainability Victoria’s Energy and Water Task Force. As detailed in Recommendation 3.16, this program works with not-for-profit community organisations to provide free energy and water saving retrofits to low income and disadvantaged communities. Additionally, the Department of Human Services is implementing its Water Saving Project with the support of the Government’s Victorian Water Trust. The project will install an estimated 37,300 AAA showerheads and more than 9000 dual flush toilets across the entire stock of public housing. Actual water saved will be evaluated following completion of the project in 2010-11.
Sustainability Victoria also has a number of programs to assist high consuming households reduce their water consumption. Households with above average consumption are most often large families, but through programs such as the Workplace Challenge, the Households Through Schools program, along with targeted household assessments, users can be given expert advice and information to help them use water in the most efficient manner possible.

**Recommendation 3.27**

The pricing structure for water moves towards a higher proportion of the bill allocated to consumption and a lower reliance on fixed charges.

**Support**

In its recent pricing decision, the Essential Services Commission (ESC) indicated that metropolitan water corporations need to rebalance their tariffs to better reflect their cost structures by having a higher proportion of costs recovered from consumption-based charges.

The ESC has determined that, for the three retailers, variable water charges will increase by 20 per cent in 2009-10 and by a total of 73 per cent over the four-year regulatory period. Fixed water charges will increase by significantly less – by 32 per cent for City West Water, 38 per cent for South East Water and 58 per cent for Yarra Valley Water over the four-year period.

The Government also notes that in this pricing decision, the ESC found that there is significant community support for this rebalancing since it will give customers greater control over their water bills and stronger incentives to use water in a sustainable way.

**Recommendation 3.28**

Melbourne’s water authorities continue to invest in leak detection and management to improve the efficiency of the water delivery system and minimise water loss.

**Support**

The Victorian Government understands that a key task in water efficiency is the minimisation of water loss through leakage and inefficiencies. Action 5.27 of the Victorian Government’s *Our Water Our Future* White Paper requires that water corporations implement leakage reduction programs and use cost-effective technologies to reduce distribution losses.

Melbourne's water corporations are working to ensure that they continue to use 'state of the art' technology to proactively detect leaks in the network, with their leakage management rated as world's best practice. To this end, Melbourne's water corporations have reduced leakage from the water delivery system by 33 per cent.
between 2002/03 and 2007/08. The water corporations’ leakage program is part of their ongoing efforts to improve efficient water system management.

**Recommendation 4.1**

The Statewide Urban Stormwater Strategy be completed as a matter of urgency and include detailed recommendations on allocation rules.

**Support in Principle**

The Victorian Government recognises the potential for stormwater to assist in the management of urban water. The Government encourages the harvesting and reuse of stormwater for fit-for-purpose uses where there is a net benefit to the community and where detrimental discharges to the environment can be minimised.

The Government is currently developing the Statewide Urban Stormwater Strategy. This strategy will provide direction around the responsibility and accountability for the management of stormwater, its impact on the environment, and its role in urban water resource systems. The strategy will be developed in consultation with stakeholders and the public.

Also informing this work is the Government’s response to the July 2008 Victorian Competition and Efficiency Commission’s *Inquiry into Reform of the Metropolitan Retail Water Sector*. This inquiry recommended that the Government clarify the rights to stormwater and responsibilities for the provision of stormwater harvesting services, and bring stormwater within the existing water resource management framework. In response, the Department of Sustainability and Environment is currently preparing advice to Government, in consultation with relevant stakeholders, on possible improvements to clarify the rights to alternative water sources.

**Recommendation 4.2**

The Victorian Government and Melbourne Water reassess the options considered in the Sinclair Knight Merz study into stormwater harvesting with the changed criteria that the harvested water be used for non-potable purposes and the annual yield requirements in the assessment be significantly reduced.

**Do Not Support**

The Government encourages the harvesting and reuse of stormwater for fit-for-purpose uses where there is a net benefit to the community and where detrimental discharges to the environment can be minimised.

The 2007 Sinclair Knight Merz (SKM) study commissioned by Melbourne Water examined the 12 most likely options for large scale stormwater treatment and reuse schemes for Melbourne. However, the study found that none of these options were viable, primarily due to insufficient yields, as well as unacceptable social and
environmental impacts associated with storage facilities and other necessary works (such as construction of pump stations, transfer pipelines, installation/upgrade of treatment plants (including UV filters). Projects of this scale would require extensive alteration to the natural environment, and as such have the potential to substantially affect environmental flows.

However, the Government is supporting a number of small-scale, decentralised stormwater harvesting projects. Local, small-scale projects tend to be more able to manage the significant challenge around storage capacity, and are also better able to manage the specific, local demand, balancing this with the variability and accessibility of suitable supply volumes of stormwater supply.

**Recommendation 4.3**

The residential subdivision requirements for stormwater management as contained in Clause 56.07 of the Victorian planning provisions be extended to cover other areas of development including industrial, commercial and public domain, such as roads.

**Support in Principle**

The Government supports appropriate stormwater management in other areas of development such as industrial and commercial subdivisions.

The Department of Sustainability and Environment is currently examining options such as extending Clause 56.07 of the Victorian planning provisions so that they will cover areas of development other than residential subdivisions, such as industrial and commercial areas. Advice will then be provided to the Minister for Water. The Department of Planning and Community Development is being consulted on options within the planning provisions.

**Recommendation 4.4**

Water sensitive urban design provisions be included in the Victorian building regulations to cover infill developments and modifications that are not captured by the Victorian planning provisions.

**Support in Principle**

The Victorian Government is currently investigating the potential for performance-based water sensitive urban design standards which would cover developments not currently captured by the Victorian planning provisions. The Government recognises that such provisions should be consistently applied across all forms of urban development, where possible.

The Government considers that this can be best achieved by establishing performance-based standards at appropriate points in the development process. This
would involve setting standards for the outcomes to be achieved, rather than prescribing what particular technologies are employed.

**Recommendation 4.5**

Targets for stormwater harvesting be introduced to Clause 56.07 of the residential subdivisions component of the Victorian planning provisions. Stormwater harvesting targets also be established for industrial, commercial and urban infill site developments in Melbourne.

**Do Not Support**

The Victorian Government supports the establishment of principles and objectives for integrated water management that would ensure that stormwater and other alternative sources of water are utilised where they provide net community benefit and minimise detrimental environmental impacts. In this context, the Government believes setting targets may not provide a cost-effective solution.

The role that stormwater harvesting plays in an integrated water management system will differ between locations depending on a combination of several factors, including demand for fit-for-purpose water, the availability and costs of other alternative sources, and the capacity for harvesting and storage capacity. The establishment of targets may distort the assessment of integrated water management options and result in sub-optimal outcomes.

**Recommendation 5.1**

The Victorian Government set enforceable water recycling and reuse targets. The primary focus should be to replace the demand for current potable water use.

**Do Not Support**

The Victorian Government does not support enforceable water recycling and reuse targets, but supports the use of targets to guide the development of recycled water schemes and the acceptance of recycled water as a viable alternative water source.

In 2001, as part of the *Growing Victoria Together* plan, the Victorian Government set a target of recycling 20 per cent of Melbourne’s wastewater by 2010. Since then, the Government has worked with the water corporations to identify a range of recycling projects, as set out in both the *Our Water Our Future* White Paper, as well as the *Central Region Sustainable Water Strategy*.

While the Government’s targets are not mandatory, water corporations are required, through their Statements of Obligations (as provided for by section 8 of the *Water Industry Act 1994*), to identify opportunities to substitute potable supplies with water from alternative sources, such as recycled water, and develop and implement programs for the sustainable use of recycled water.
Since 2001, the water recycling and reuse targets have helped to guide the development of recycled water schemes and the acceptance of recycled water as a viable alternative water source. As water recycling becomes an increasingly established practice in Victoria, the Government recognises that care needs to be taken in setting any future targets. Enforceable targets have the potential to create perverse incentives, where a requirement to meet a target is likely to distort the decision-making process. Water recycling proposals and schemes must instead be able to show demonstrable social, economic and environmental benefit to the community within the broader context of meeting these targets.

**Recommendation 5.2**

The Victorian Government establish new recycling and reuse targets - 50 per cent by 2012 and 70 per cent by 2015. An increased target would reduce demand for potable water, minimise discharges to receiving bodies and promote the importance and value of water conservation and efficiency.

**Support in Principle**

The Victorian Government supports the notion that new recycling and reuse targets be set, where they can be shown to be economically, socially and environmentally beneficial to the community, but not at the levels proposed in Recommendation 5.2.

The original water recycling and reuse targets were introduced in 2001 in order to move the water corporations from a relatively low base of water recycling. Over time, with increasing pressure on water supplies from population growth, climate change and drought, recycling has become a much more viable option when seeking to balance demand and supply. The move towards greater water recycling has been supported by the Victorian Government through the Water Industry Act 1994, the Statements of Obligations, Essential Services Commission regulation and funding support by Government.

However, there is a risk that by increasing targets arbitrarily, the targets themselves could become the primary driver of recycled water projects, displacing objective business case development which carefully identifies demand, as well as the investment required to deliver the resource to meet that demand. This would be a perverse outcome, resulting in substantial cost burdens on communities for relatively minimal benefit. While targets provide a signal for the supply of recycled water, they do not necessarily result in a corresponding increase in the demand for recycled water. The Government therefore will continue to support recycled water projects where they can be shown to be economically, socially and environmentally beneficial to the community.
Recommendation 5.3

The Victorian Government move toward the prohibition of wastewater discharge into waterways and the ocean.

Support in Principle

The Victorian Government is working to reduce harmful wastewater discharges into waterways and the ocean.

Moving towards the prohibition of wastewater discharge into waterways and the ocean is technically difficult to achieve, costly and may lead to sub-optimal outcomes. The Government will continue to promote the reduction of harmful wastewater discharge to waterways and the ocean where there are net benefits, consistent with meeting the objectives of the State Environment Protection Policy (SEPP) and the integrated principles under the Environment Protection Act 1970. The SEPP requires the practicability of the proposed actions to be taken into account to ensure that the environmental benefits justify the social and financial costs. This requires consideration of the following issues:

- the severity of the environmental risk in question and the environmental benefits of removing or mitigating that risk;
- the state of knowledge of the environmental risk and options for removing or mitigating that risk;
- the availability, efficiency and suitability of options to remove or mitigate that risk; and
- the financial and social costs and benefits of removing or mitigating that risk.

Recommendation 5.4

The Victorian Government commit to finding a use for all treated wastewater.

Support in Principle

The Victorian Government will continue to encourage and facilitate water corporations finding a fit-for-purpose use for treated wastewater, where the use of the recycled water presents a net community benefit.

The Government has facilitated a number of large and small scale recycling projects. For example, the Werribee Irrigation District Recycled Water Scheme was Melbourne's first large commercial recycled water project. The project assists in providing a sustainable future for Werribee vegetable growers by increasing the reliability of water supply for local growers. The project provides benefits to the environment by reducing the amount of treated effluent discharged to Port Phillip Bay.
Recommendation 5.5
The Victorian Government mandate dual pipe systems, or other water saving measures in new residential and industrial developments.

Support in Principle
The Victorian Government, via Clause 56 of the Victorian planning provisions, provides water corporations with the power to mandate dual pipe systems for particular areas, where they are identified as the best solutions for balancing overall supply and demands. These areas are likely to be located close to wastewater treatment plants or a long way from drinking water supplies. Dual pipe systems become increasingly expensive the further away the suburb is from the treatment plant.

Water savings measures in new homes are already mandatory and the Government is currently investigating the potential for performance-based water sensitive urban design standards which would cover developments not currently captured by the Victorian planning provisions.

At this point in time in metropolitan Melbourne, 33 new suburbs have been mandated for the use of dual pipe recycled water (estimated to be more than 85,000 properties). With the recent expansion of the urban growth boundary, this number is likely to increase.

Recommendation 5.6
The Victorian Government, where practicable, should encourage the installation of dual pipe systems in existing residential and non-residential areas which are located in close proximity to wastewater treatment plants.

Support in Principle
The Victorian Government encourages the installation of dual pipe systems in existing residential and non-residential areas which are located in close proximity to wastewater treatment plants. These schemes are most viable when there is a combination of readily identifiable demand, along with geographic proximity to a treatment plant which facilitates a suitably accessible supply of recycled water.
Recommendation 5.7

The metropolitan water retailers and Melbourne Water finalise guidelines to facilitate sewer mining projects.

Support

The Victorian Government supports the finalisation of guidelines to facilitate sewer mining projects by the metropolitan water retailers and Melbourne Water.

A working group, consisting of Government representatives, as well as representatives from Melbourne Water and the water corporations, has developed a sewer mining toolkit and draft guidelines to help businesses assess applications. The toolkit will comprise the following elements:

- Water corporations sewer mining policy;
- Sewer mining guidelines that provide all relevant information for a potential sewer mining applicant including process outline, assessment and pricing considerations and dispute resolution process; and
- Internal application assessment guiding principles.

The draft guidelines and associated assessment and approval processes are currently being trialled by the metropolitan water businesses with a view to implementation later in 2010.

Recommendation 5.8

The Victorian Government should continue to promote the development of sewer mining projects as a decentralised wastewater treatment option suitable for a variety of uses and locations.

Support

The Victorian Government will continue to promote the development of sewer mining projects where they can be shown to be both feasible and economically, socially and environmentally beneficial.

There are currently no non-pilot sewer mining operations in Victoria, however there has been a significant increase in interest from prospective sewer mining operators and there are several projects at various stages of development. When the guidelines and any legislative amendments that are required have been finalised, the Government expects the level of interest to increase.
**Recommendation 6.1**

A moratorium should be placed on the issue of all new bore construction and groundwater extraction licences in aquifers covered by Greater Melbourne.

**Support in principle** a moratorium on the issue of groundwater extraction licences in aquifers covered by greater Melbourne.

**Do not support** a moratorium on the issue of all new bore construction licences.

The Victorian Government supports a moratorium on the issue of groundwater licences to the extent necessary to protect the groundwater resource. Moratoriums on new groundwater extraction licences already apply in areas potentially under stress or where Permissible Consumptive Volumes (PCVs) have been reached. Most of the useable groundwater in Greater Melbourne occurs within defined existing management areas which have PCVs limiting the total volume of water that can be allocated. There is an embargo on new groundwater extraction licences in Deutgam Water Supply Protection Area (WSPA), Wandin Yallock WSPA, Koo-Wee-Rup WSPA and Nepean Groundwater Management Area.

New management areas are currently being prepared for the whole of Greater Melbourne through a project being coordinated by the Department of Sustainability and Environment. PCVs will be determined for all management areas. The number of applications being made for new extraction licenses in these areas is small. Additionally, these applications are adequately regulated through the licensing regime set out by the *Water Act 1989*. A moratorium is not necessary.

The Government does not support a moratorium on all new bore construction licences. Bores can be used for purposes other than taking water, such as resource monitoring. The Government does, however, recognise that in recent years the number of domestic and stock bores in Melbourne has grown in response to drying conditions. This water is not licensed, metered, or charged for, as it is a private right under section 8 of the *Water Act 1989*; only a bore construction licence is required. The Government, through the Northern Region Sustainable Water Strategy (released on 9 December 2009), has introduced some initial statewide measures to improve our understanding and management of domestic and stock water use. These measures include: monitoring growth in domestic and stock use; issuing guidelines for reasonable domestic and stock use to ensure consistency and fairness in exercising section 8 rights; and reviewing the approach to domestic and stock water management in 2011 following the release of the Draft Murray Darling Basin Plan.
Recommendation 6.2

A groundwater management strategy, which builds on the actions stated in the Central Sustainable Water Strategy relating to groundwater, should be developed for Victoria and Greater Melbourne as a matter of urgency.

Support in Principle

The Victorian Government will use its existing water management planning framework to manage groundwater. This is via a combination of legislative provisions and regional Sustainable Water Strategies.

The Government regulates licensed groundwater extraction through a management framework in line with the Water Act 1989. The Sustainable Water Strategies are aimed at securing long-term water supply from groundwater and surface water. They establish water management reforms needed to manage future risks and specific resource issues. While strategies are being developed on a regional basis many issues have Statewide relevance, in which case policy outcomes would be implemented on a Statewide basis, including across greater Melbourne.

Most of the actions stated in the Central Region Sustainable Water Strategy have already been completed or are underway (Permissible Consumptive Volumes set for all defined management areas, reporting through the State Water Report, management plans being developed, working with the earth resources industries, salinity control, establishment of management rules, resource appraisals, aquifer recharge opportunities, and licensing improvements). Remaining actions being progressed through the Sustainable Water Strategies relate to the identification and protection of groundwater dependent ecosystems.

Recommendation 6.3

The Victorian Government initiates further targeted investigations of suitable sites for aquifer storage and recovery, and if possible, establishes further demonstration and trial projects.

Support in Principle

The Victorian Government recognises that Aquifer Storage and Recovery (ASR) has the potential to provide alternative water resources within greater Melbourne. The Government sees ASR as an opportunity in some locations but not as a solution to Melbourne’s water needs.

ASR is a new technology in Australia and there is limited knowledge of its capabilities. Issues for ASR included aquifer suitability (some aquifers have a limited capacity to be recharged), chemistry compatibility between injected water and the aquifer, surface storage before water is pumped into an aquifer, relatively high costs, and ownership and access to the resource once it is injected. Studies to-date show that
ASR can benefit small scale development but is not feasible for large-scale schemes for Melbourne. Therefore, only a small proportion of Melbourne’s stormwater could potentially be used for ASR.

The Government is assessing and mapping the potential for ASR within greater Melbourne. There are a number of ASR trial sites underway, including Mernda Villages, Rossdale Golf Course, and Blackrock ASR Feasibility. Potential sites for local ASR schemes are the golf courses along the Yarra River (using the river alluvial aquifers), the new urban developments on the urban fringes (using the basalt aquifers), and the northern suburbs along the Tullamarine freeway (using deep lead aquifers). The Government has also invested, through the Victorian Water Trust, in two ASR demonstration projects.

The use of ASR is also progressing by way of advancements in regulatory guidance. National guidance on the application of Managed Aquifer Recharge (MAR) has recently been completed. (At a national level, ASR is encompassed by the broader description of MAR.) EPA Victoria has prepared Victoria-specific guidance on MAR to assist development of MAR schemes by clearly outlining the assessment requirements for any proposed system.

**Recommendation 7.1**

The contract for the Wonthaggi desalination plant be designed to allow the volume of water the plant supplies to be varied, so as not to provide disincentives for water conservation and the development of other water supplies – including stormwater and recycling – for Melbourne.

**Support**

The Victorian Government supports this recommendation and has designed the contract for the Victorian Desalination Project so that the State can order increments from zero to 100 per cent of the capacity of the project in any year.

In September 2007, the Government announced that the Victorian Desalination Project would be delivered as a Public Private Partnership (PPP) under the Government’s *Partnerships Victoria* framework.

The Premier announced on 30 July 2009 that the Aquasure consortium had been awarded the contract to deliver the Victorian Desalination Project. The announcement confirmed that contractual arrangements for the project will give the Government flexibility to order water in annual block increments, starting at zero, then 50, 75, 100, 125, 150 GL as required.

Desalinated water will be delivered from the private sector to the State Government owned water corporations, which will deliver this water to households. The Government will own the water, thus the public interest and ownership of water is protected.

**Recommendation 7.2**
The moratorium proposed in Recommendation 6.1 also apply to the construction and operation of groundwater desalination systems.

Do Not Support

The Victorian Government does not support a moratorium on the construction and operation of groundwater desalination systems.

Much of Melbourne’s groundwater is brackish and desalination is not a useful source of water in greater Melbourne on a large scale. As saline or brackish groundwater is expensive to treat, it is generally not used. There are also environmental risks associated with its use. However, groundwater desalination is an emerging technology that may, after further development and testing, be useful in small volumes or in some particular circumstances. The technology should be able to be trialled and tested, so that the technology and its application can be better determined. The Water Act and the Environment Protection Act provide powers/provisions to ensure that the potential adverse impacts are taken into account.

Recommendation 8.1

No additional dams be constructed to supplement Melbourne’s water supply.

Support

The Victorian Government maintains its ‘no new dams’ policy for Melbourne.

The Government does not support the construction of new dams to augment Melbourne’s water supply. As explained in the Our Water Our Future White Paper, building a new dam would not create water, but rather would take water from existing users.

A new dam, wherever it is built, would have significant effects on downstream communities and ecosystems. A desktop study undertaken in 2005 by Sinclair Knight Merz examined the seven most feasible sites for a new dam for the supply of water to Melbourne, and found that, in all cases, there was a potential threat to downstream agriculture. Moreover, this same study found that, at all the sites examined, a new dam would threaten water quality, and that the risk of losing already endangered species ranged from ‘moderate’ to ‘severe’.

Environmental impacts such as these can have significant consequences, including increased algal blooms. The flooding of forests which could result from a new dam can also have significant environmental impacts: flooded forests are a major source of greenhouse gases as the vegetation breaks down.

Building a new dam is also unlikely to be economically viable. The Victorian Government believes that the best dam sites in Victoria are already being used. The sites typically suggested are not only on relatively small rivers, which in turn means
that a dam would have to be very substantial, but the sites are generally a long way from Melbourne’s water grid, thus necessitating very long and energy intensive pipelines. Recent Government feasibility studies have shown that the dams typically suggested would not be cost effective, by comparing the significant expense of building such a dam against the moderate volume of water it could supply.

Rainfall predictions are increasingly uncertain in the face of the impact of climate change. Given that, the Government has moved to diversify Melbourne’s water supply, so that water security is less dependent on rainfall. The Victorian Water Plan includes construction of a desalination plant, ongoing infrastructure upgrades and water saving initiatives, and an expansion of the Victorian water grid which permits an increased interconnection of supplies. These initiatives, rather than investment in new dams, mean that Melbourne's future water supply will be less reliant on rainfall, and therefore will be more secure.

**Recommendation 8.2**

In order to quantify the effects of thinning and prescribed burning (in appropriate areas) in Melbourne’s water catchments, the Victorian Government initiate a detailed investigation and trial.

**Support in Principle**

The Victorian Government is currently conducting a project that will provide information for the Government to develop a future management plan for the State forests that supply water to Melbourne. The four-year project will fulfil the Government’s *Our Water Our Future*, White Paper commitment to investigate the impact of timber harvesting on water yield within Melbourne’s catchments.

The research results comprise:

**Hydrological studies:** Develop models that estimate water yields within Melbourne catchments based on the existing water, climate, landscape and forest conditions. The impact of bushfire and climate change on water yield is also considered. These models are used to predict the impact of a range of forest management regimes, including timber harvesting, on water and timber yield in Melbourne’s catchments.

Scientific evidence indicates little additional water would be gained in the short term if forest management was changed. Over time water yield gains can be made without major impact on timber supply commitments. For example, modelling predicts that timber harvesting over a 120-year rotation could increase water yield by 5 GL (2 per cent) per annum in 2050 while reducing sawlog yield by 3,000 m3 (2 per cent) per annum in 2050 in comparison with the status quo of a nominal rotation length of 80 years.

**Timber substitution studies:** Investigate the feasibility of using plantation grown timber to replace native forest timber harvested from Melbourne’s catchments. The studies found this was not feasible from existing plantations in the short term, particularly for appearance-grade timber. The studies consider current markets and
timber commitments, supply from existing and potential plantations and the availability and suitability of land for plantation establishment.

**Water quality review:** Examine the water quality issues associated with timber harvesting through a review of relevant literature, and environmental audits of timber harvesting in Melbourne’s catchments. The main impacts of timber harvesting on water quality relate to sediment contamination from unsealed road runoff. These impacts are localised and short-term and most often negligible or minor or occasionally moderate.

The hydrological and timber substitution studies have been reviewed by independent experts who are leaders in their fields of hydrology and the science of wood and plantation forestry, which has ensured the research is to a very high standard.

There are also currently a number of ongoing studies (initiated by DSE and by Melbourne Water) which will improve our understanding of the way forests and streamflows respond to thinning and prescribed fire. The Government intends to draw on the findings of these studies as well as information already available from past studies (both within Melbourne’s catchments and elsewhere in the State) to maintain best practice catchment management.

**End**