



The Northern Region Sustainable Water Strategy will guide the region's response to future droughts and the uncertainty of climate change.

# What is the Northern Region Sustainable Water Strategy?

## Guide to the chapter

Section 1.1 Role of regional sustainable water strategies

Section 1.2 The Northern Region

Section 1.3 Guiding principles

Section 1.4 The Strategy process

- Assessing potential responses

## Key points of the chapter

-  The Northern Region takes in Victoria's share of the River Murray and the major Victorian rivers that flow north into it.
-  The Strategy identifies and analyses threats to water availability and quality. It sets out actions to ensure water entitlements are secure and provides more choice and flexibility for entitlement-holders to manage the risks imposed by drought and climate change.
-  The Strategy is the result of an 18 month collaborative process involving government departments, independent experts, key stakeholders in the water industry and the broader regional community.

## 1.1 Role of regional sustainable water strategies

Sustainable water strategies take a long-term view of water resource planning, considering all sources of water and the needs of towns, industry, agriculture and the environment. They guide the development, integration and implementation of management plans prepared by water corporations and catchment management authorities operating within each region.

Regional sustainable water strategies were legislated through the 2005 amendments to the *Water Act 1989* and fulfil Victoria's commitment to the National Water Initiative to carry out open, statutory-based water planning.

The Northern Region Sustainable Water Strategy aims to:

- identify and understand threats to water availability and quality, including the implications of climate change and variability
- help regional communities to adjust to reduced water availability
- ensure secure water entitlements for towns, industry and the environment
- encourage economically viable and sustainable agriculture
- improve choice and flexibility for entitlement-holders to manage the risks of climate change and variability
- protect and where possible, improve the health of rivers, wetlands and aquifers from the impacts of drought, climate change and variability and other risks
- recognise and respond to Indigenous and other cultural and heritage values associated with the region's rivers and catchment areas.



Grapevines, Mclvor Estate

## 1.2 The Northern Region

The Northern Region includes Victoria's share of the River Murray and the major Victorian tributaries that flow north into it including the Kiewa, Ovens, Broken, Goulburn, Campaspe and Loddon rivers (see Figure 1.1). Major groundwater management areas in the region include the Upper and Lower Ovens, Mid-Goulburn, Shepparton Irrigation, Katunga, Campaspe Deep Lead, Mid and Upper Loddon. Major urban centres in the region include Wodonga, Wangaratta, Benalla, Shepparton, Bendigo, Swan Hill and Mildura.

Rural water supplies are managed by Goulburn-Murray Water and Lower Murray Water and urban supplies are managed by North East Water, Goulburn Valley Water, Central Highlands Water, Coliban Water and Lower Murray Water. The Northern Region *does not* include the urban supply systems of Avoca, Amphitheatre, Ballarat, Beaufort, Blackwood, Forest Hill, Landsborough, Learmonth and Redbank which are managed by Central Highlands Water and the towns Borung, Korong Vale, Wedderburn and Wychitella on the Wimmera-Mallee system which are supplied by Coliban Water.

The role as caretakers of river health in the region is shared by the North East Catchment Management Authority, Goulburn Broken Catchment Management Authority, North Central Catchment Management Authority and Mallee Catchment Management Authority.

See page 171 for a full outline of key roles and responsibilities in water resource management.

Figure 1.1 The Northern Region



## 1.3 Guiding principles

The following principles guide the Strategy, providing the framework for assessing options to secure northern Victoria's water future:

### Shared responsibility and shared benefit

- > Everyone needs to act to secure water.
- > All entitlement-holders need to share the risk of reduced water availability caused by climate change. This includes rural and urban water users and the environment.
- > Overall community benefits will be maximised and no generation or group will incur unwarranted extra costs or receive additional benefits.
- > All stakeholders will be treated equitably.

### Recognising existing rights and entitlements

- > Entitlements will remain secure with legal tenure that is certain and protected.
- > The right to a share of the available resource will be protected, even if reliability is reduced due to climate change.
- > If actions have material third party impacts, these impacts will be defined and minimised, mitigated, offset or compensated by the beneficiary.
- > In defining impacts on existing rights, the assessment will be appropriate to the magnitude of the impact and accuracy of information available.

### Allowing individuals to manage their own risk and exercise their choices

- > Strategy actions will aim to maximise the ability of entitlement-holders to manage their own risk.
- > As far as possible, risk will be the responsibility of those best equipped to manage it – in most cases, this will be individual entitlement-holders.
- > Strategy actions will facilitate informed decision-making and maximise the ability of individuals to exercise choice.



Hay near Myrtleford

Photographer: Emily Hart

### Being prepared without acting prematurely

- > Strategy actions and policies will be robust under all water availability scenarios.
- > Strategy actions will aim to address the risks associated with severe climate change – avoiding unacceptable costs if this doesn't occur.
- > Ongoing monitoring and evaluation will facilitate adaptive management to ensure that we will be prepared for the future as it unfolds.

### Maximising efficiency and seeking multiple benefits

- > Water is scarce and will be delivered and used as efficiently and effectively as possible to maximise the benefits – for water users, the environment and the broader community.
- > Strategy actions will target multiple benefits – economic, social, cultural and environmental.

### Maximising environmental outcomes

- > Strategy actions, when considered together, will aim to result in no net negative impacts and where possible, environmental gain.
- > Strategy actions will aim to protect or enhance ecological values.
- > Strategy actions will seek opportunities to improve water delivery and outcomes for the environment.

### Socially responsible decision-making

- > Decisions about water resource management will be socially responsible and consider economic, social and environmental impacts.
- > Decisions about water sharing will be equitable and reflect community values (as sought through the Strategy's consultation processes, which will be open and transparent).
- > Strategy actions will be transparent in terms of the benefits gained or costs imposed (that is, trade-offs).
- > Decisions about Strategy actions will consider impacts at all scales, including on:
  - individuals
  - businesses (farm and non-farm)
  - local, regional and State communities
  - Commonwealth/national objectives.

## 1.4 The Strategy process

The Northern Region Sustainable Water Strategy is the result of an 18 month collaborative process involving Government departments, independent experts, key water industry stakeholders, including urban, rural and environmental water users and the broader regional community. Major outputs from the process are outlined in Figure 1.2.

The Minister for Water appointed a Consultative Committee of regional stakeholders to provide strategic guidance and oversight of the Strategy's development, (see Table 1.1). The committee met 15 times between January 2008 and August 2009. Its deliberations helped shape the required technical work and provided local perspective on the Strategy's consultation, option development and assessment processes.

Figure 1.2 How the Northern Region Sustainable Water Strategy was developed



**Table 1.1 Consultative Committee members**

<i>Independent Chair</i>	<i>Denis Flett</i>
Department of Sustainability and Environment	John Cooke, Tony Long, Campbell Fitzpatrick and Jane Doolan
Department of Primary Industries	Neil McBeath
Murray-Darling Basin Commission/Authority	Wendy Craik / Katrina McGuire
Victorian Farmers Federation	Richard Anderson
Northern Victoria Irrigators	Barry Croke
Community representative	John Dainton
Fruit Growers Victoria	John Wilson
Australian Dried Fruits Association	Tony Martin
United Dairy Farmers of Victoria	Ian Cobbledick
Municipal Association of Victoria	Neil Repachioli and Barbara Murdoch
Australian Conservation Foundation (until November 2008)	Paul Sinclair
Environment Victoria	Juliet Le Feuvre
North East Catchment Management Authority	John Riddiford
Goulburn Broken Catchment Management Authority	Bill O'Kane
North Central Catchment Management Authority	Gavin Hanlon / Damian Wells
Mallee Catchment Management Authority	Jenny Collins
North East Water	Jim Martin / Craig Heiner
Goulburn Valley Water	Laurie Gleeson / Peter Quinn
Coliban Water	Geoff Michell / Gavin Hanlon
Central Highlands Water	Neil Brennan
Goulburn-Murray Water	Garry Smith / Ian Moorhouse
Lower Murray Water	Owen Russell
First Mildura Irrigation Trust (until August 2008)	Ian Matheson

Allocation, environment, licensing and urban working groups were established to support the Committee. Membership included regional water corporations and catchment management authorities, irrigators, peak industry representatives and local environment group members. Members came from across northern Victoria including the Sunraysia, North Central, Goulburn Broken and north eastern areas. Collectively these groups met 15 times between January 2008 and September 2008 to identify and assess options to be included in the Draft Strategy. The allocation and environment groups reconvened between December 2008 and March 2009 to provide input to a review of carryover arrangements. These and the licensing group continued to meet to provide advice on actions and policies in the Strategy.

Consultation occurred with Traditional Owner groups across the Northern Region (see Table 1.2). Although each group in the Northern Region has its own unique way of operating and its own issues and aspirations several key points were consistently made in relation to future water management in the Northern Region, including:

- the importance of health of Country
- ensuring that Traditional Owners are active participants in managing water.

Further information on the issues, concerns and aspirations raised by Northern Region Traditional Owners can be found in Background Report 11.

**Table 1.2 Indigenous groups consulted in the development of the Strategy**

Bangerang People	Nyera Nyera People
Barapabarapa People	Tati Tati People
Dhudoroa People	Taungurung People
Dja Dja Wurrung People	Wadi Wadi People
Jarra Jarra People	Wamba Wamba People
Latji Latji People	Way Wuru People
Ngintait People	Yorta Yorta People

Regional stakeholders hosted more than 75 briefings and meetings with local communities and two public comment periods drew 135 and 177 submissions respectively. These submissions provided a range of perspectives from the irrigation, environment, tourism, cultural and industry sectors and were used in developing and assessing options for inclusion in this Strategy.

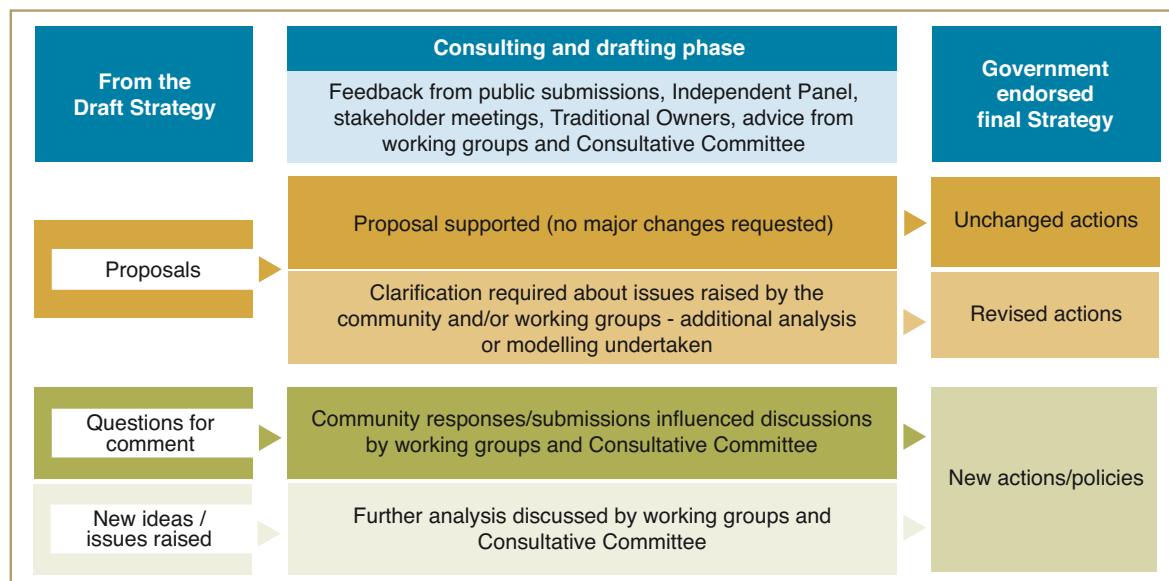
Other opportunities for the community to provide input included briefings for boards and customer committees of water corporations and catchment management authorities, briefings with local government (including the Municipal Association of Victoria), irrigation and environment peak industry groups (for example, grower groups, Victorian Farmers Federation, Environment Victoria) and special interest groups (for example, Upper Murray Agribusiness, Murray Campaign Committee, Waterwatch and Landcare groups).

### 1.4.1 Assessing potential responses

The consultation program helped to identify, filter and progress key proposals (from the Draft Strategy) into the actions and policies committed to in this Strategy (see Figure 1.3). In particular, deliberations by the Consultative Committee and working groups helped to assess each option against the Strategy's guiding principles and identify where further hydrological modelling and socio-economic data was needed. Background Report 12 provides more information about the results of this analysis and additional analysis completed between the Draft and this Strategy.

An Independent Panel was appointed by the Minister for Water to consider public submissions and other feedback from the consultation program. Appendix 1 provides information on the role and membership of the Panel and outlines the government's response to the Panel's key findings on the Draft Strategy submissions. Public submissions and the Panel's reports are available at [www.ourwater.vic.gov.au/programs/sws/northern/submissions](http://www.ourwater.vic.gov.au/programs/sws/northern/submissions).

**Figure 1.3 Process to develop Draft Strategy proposals into Strategy actions**





# Reference Guide # 1:

## Tier 1 - Rights held by Crown



## Tier 2 - Rights to authorities

### Environmental water reserve

- Environmental entitlements
- Obligations on consumptive entitlements
- 'Above cap' water

### Bulk entitlements

- Source bulk entitlements
- Delivery bulk entitlements

## Tier 3 - Rights granted to individuals

### Rights to water

Water shares

Section 51 licences

Section 8 rights

Supplies to urban customers

Supplies by agreement

### Associated entitlements

Delivery shares

Water-use licences

Section 67 licences

# Water entitlements

Water entitlements are defined in the *Water Act 1989* and are issued by the Minister for Water. A water entitlement is the amount of water authorised to be stored, taken and used by a person under specific conditions. Associated entitlements set conditions for water delivery or use.

<p><b>Environmental water reserve (EWR)</b></p>	<p><b>Bulk entitlements</b></p>
<p>The EWR is the legally recognised amount of water set aside to meet environmental needs. The objective of the EWR is to preserve the environmental values and health of water ecosystems.</p>	<p>Held by water corporations with secure tenure in perpetuity. They provide the right to water for system operations, seasonal allocations and other rights and obligations.</p>
<p><b>Environmental entitlements</b> are generally identical in nature to bulk entitlements. They provide for a share of the available resource.</p>	<p><b>Source bulk entitlements</b> provide a share of inflows, storage capacity (if applicable) and releases.</p>
<p><b>Obligations on entitlements</b> include the passing flows that water corporations or licensed diverters are obliged to provide out of storage or past a diversion point. The portion of passing flows that is provided to meet environmental needs is considered a part of the EWR.</p>	<p><b>Delivery bulk entitlements</b> provide a set volume of water each year, subject to defined restrictions during periods of water shortages.</p>
<p><b>'Above cap' water</b> includes water that is left over after limits on diversions have been reached and unregulated flows which cannot be kept in storage. Most of the EWR is comprised of 'above cap' water, and this component is most susceptible to climate change.</p>	

<p><b>Water shares</b> have secure tenure held in perpetuity. A share of the available resource in most regulated systems is allocated annually (through seasonal allocations), which can then be ordered to a specified location, at a specified time and rate.</p>	<p><b>Section 51 licences</b> allow for diversions from unregulated (and some regulated river systems) and extractions of groundwater. Licences are issued for a specified volume, period of time and with a range of conditions.</p>	<p><b>Section 8 rights</b> provide for an individual to take and use water from a range of surface and groundwater sources for domestic and stock use under certain circumstances without a licence.</p>
<p><b>Supplies to urban customers</b> must be provided by water corporations throughout their defined districts.</p>	<p><b>Supplies by agreement</b> are arranged by water corporations to provide water outside of defined districts, and recycled and drainage water in special circumstances.</p>	
<p><b>Delivery shares</b> provide for water to be delivered to land in an irrigation district via a channel. Delivery shares are linked to delivery infrastructure and stay with the property if the water share is traded.</p>	<p><b>Water-use licences</b> allow an irrigator to use water to irrigate land up to an annual use limit.</p>	<p><b>Section 67 licences</b> provide for the construction of a groundwater bore or any works on a waterway, such as a private pump or dam, when a Section 51 licence is required.</p>

## Reference Guide #2

### Limits on water entitlements

It is important that water allocation and diversions do not reduce reliability of supply for other entitlement-holders or impact on important environmental values. There are a range of tools to limit water entitlements to achieve this.

**The Murray-Darling Basin Cap** limits the volume of surface water that can be diverted from each of the Basin's major rivers. The limit is set at the volume that was diverted under the 1993/94 levels of development. As a result, Victoria does not issue any new entitlements or licences unless water is created from water savings projects. Allocations to existing entitlements must remain below the Cap.

**Permissible consumptive volumes (PCVs)** are the maximum volume of water that can be used for consumptive purposes for groundwater or surface water. PCVs are progressively being set for all groundwater management areas and water supply protection areas. For these areas, licences are not issued if the PCV is already reached or if licences would cause it to be exceeded.

**Sustainable diversion limits (SDLs)** limit water use in unregulated systems. They prevent the issuing of summer licences and determine the upper limit on winter-fill diversions, beyond which there is an unacceptable risk to the environment. SDLs have been set for 1,584 sub-catchments across Victoria. They determine if a licence can be traded from one sub-catchment to another.

### Key processes to change entitlements

To protect the integrity of Victoria's entitlements, the Water Act 1989 outlines clear, consultative processes that must be undertaken before entitlements can be changed.

#### Permanent changes

##### 15-year review of water resources

A water resource assessment must be undertaken every 15 years to identify if there has been any long-term reduction in water availability and whether this has fallen disproportionately on water users or the environment. It will also identify any flow-related deterioration in waterway health. If either is the case, a review must be undertaken to determine the appropriate action considering social, economic and environmental values. This could include a permanent change to entitlements. The first 15-year review is due in 2019.

##### Management plans for water supply protection areas

In highly stressed groundwater and unregulated river systems, a management plan can be used to change conditions on Section 51 licences to ensure long-term sustainable use.

#### Temporary changes

##### Qualification of rights

The *Water Act 1989* provides the Minister for Water, (as a last resort under severe conditions) with powers to declare a water shortage and temporarily override existing water entitlements to reallocate water to priority uses. This process is known as a qualification of rights. In effect, water is taken from some entitlement-holders and used to supply others; normally to meet critical human needs.

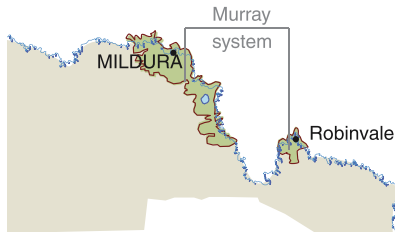
Critical human needs can be defined as the amount of water required to meet Stage 4 restricted demand in urban areas, supply domestic and stock needs and operate the distribution system to deliver that water.

As qualifications advantage one group of water users at the expense of another, generally with no compensation, qualifying rights is undertaken only in line with clear and transparent guidelines.

### Victorian Water Register

To improve the recording and transparency of its water entitlements, Victoria has developed the Victorian Water Register (see [www.waterregister.vic.gov.au](http://www.waterregister.vic.gov.au)). The register records bulk entitlements, environmental entitlements, water shares and licences to improve integrity and enable proper water accounting. It keeps track of the water market and produces crucial information for managing the State's water resources.

# Water resource management



## Management areas

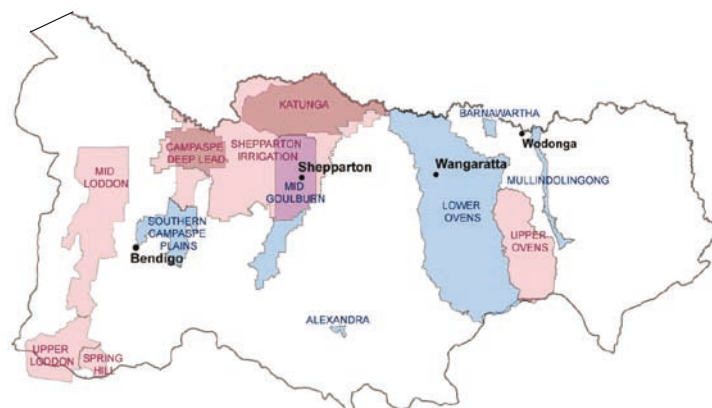
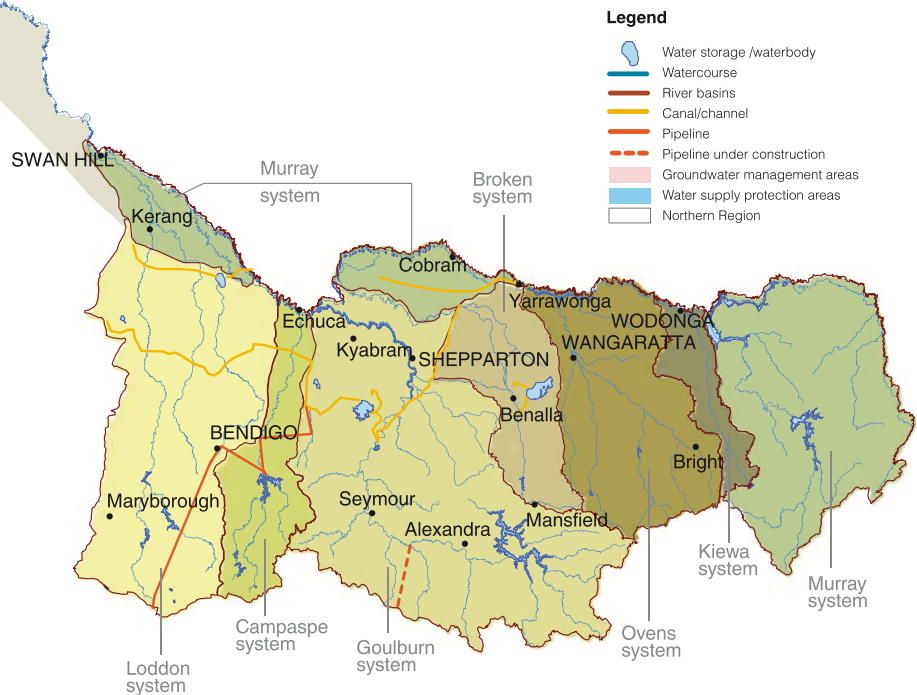
Current management areas define the scale at which diversion limits and other plans will be applied.

A river basin or system is the area of land where surface water run-off drains into streams and creeks that eventually flow into a single river. These streams and creeks are known as 'tributaries'.

Water supply protection areas (WSPAs) can be declared where strict management is required to protect the groundwater and/or surface water resources in the area. Once an area has been declared, a management plan is prepared.

Groundwater management areas (GMAs) are the defined areas from which water is extracted from an aquifer, generally where groundwater has been well developed or has the potential to be developed.

Unincorporated areas are generally areas in which groundwater resources are of poor quality and yield.



## Responding to seasonal variability

Water availability varies considerably from year to year. This means an entitlement-holder may not always have access to their full entitlement volume. Annual use is determined by the following methods.

Seasonal allocations are the volume of water provided to water share-holders in a given year, expressed as a percentage of the total entitlement volume.

Urban water restrictions are introduced by water corporations in towns and cities to restrict outdoor use in times of shortage.

Rosters, restrictions and bans are applied in unregulated river and groundwater systems to limit the timing or amount of water extraction. The rules for applying these are documented in local management rules, or management plans.