



Department of
Infrastructure, Planning and Natural Resources

A guide to the Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources

September 2004



A Guide to the Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources (as amended 1 July 2004)

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This publication is a guide only. It is not intended to set out all the requirements of the water sharing plan. Anyone requiring details of how their legal rights are affected should refer to the gazetted water sharing plan.

Introduction

This guide provides an explanation of the main sections of the Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources gazetted on 26 February 2003 and including the amendments gazetted on 1 July 2004.

The Plan commenced on 1 July 2004 and applies for a period of 10 years to 30 June 2014. It is a legal document made under the *Water Management Act 2000*. The Plan is implemented by the Department of Infrastructure, Planning and Natural Resources.

The provisions in the Plan provide water for the environmental needs and ecological processes of the Murray and Lower Darling Regulated Rivers Water Sources, and direct how the water available for extraction is to be shared. The Plan also sets rules that affect the management of **access licences**, water allocation accounts, the trading of or dealings in access licences and water allocations, the extraction of water, the operation of dams, and the management of water flows. Many of these provisions are similar to those that were in place prior to the Plan.

The water in the Murray and Lower Darling is shared between New South Wales, Victoria and South Australia according to the Murray-Darling Basin Agreement and its consequent arrangements. The Plan only deals with sharing of the water in the NSW Murray and Lower Darling which is within the direct control of NSW.

The water available to NSW in the Murray is, in part, dependent on the water available from Menindee Lakes on the Lower Darling. However, in most other respects, the sharing and allocation of water in the two water sources are independent.

In some cases, new terminology has been introduced to ensure that the Plan is consistent with the Act. These new terms are highlighted in the text (**bold** text) and are explained in the glossary at the back.

A number of the rules in the Plan are quite complex, and cannot be fully explained in this summary guide. You should refer to the statutory plan for specific details of the rules (see *Additional information*).

Background

The Murray River is recognised as the border between NSW and Victoria. Water travels 2,500 kilometres from the Murray's source in the Snowy Mountains to where it drains into the Southern Ocean in South Australia. The NSW regulated portion of the river is approximately 1,700 kilometres long.

The Lower Darling is the lower portion of the Barwon-Darling River, which runs for some 2,700 kilometres and drains a catchment that includes the central and northern portions of inland NSW and much of south-western Queensland. The regulated portion of the Lower Darling, below Menindee Lakes, is some 500 kilometres long.

The volume and pattern of flows in the Murray River have been greatly altered by the construction of Hume Dam on the Murray, Dartmouth Dam on the Mitta-Mitta River and numerous weirs and diversion structures. These works facilitate the supply of water to extractors and the diversion of water from the Snowy River through the Snowy Mountains Scheme into the Murray.

Lower Darling River flows have been changed by the construction and operation of Menindee Lakes and the extraction of water along the Barwon Darling River. Dams and extractions on its tributary rivers have also greatly affected inflows to the Darling River.

These changes have impacted on the environmental health of both river systems and contributed to water quality problems. The water sources are areas of spiritual and cultural significance for the Yorta Yorta, Wiradjuri, Wamba Wamba, Barapa Barapa, Wadi Wadi, Muthi Muthi, Latji Latji, Barkanji, and the Nyampa peoples.

Development of the Plan

The Murray Lower Darling Community Reference Committee was established in 1997 to provide recommendations on environmental flow rules. The Committee included representatives of the irrigation industry, environmental interests, indigenous communities, the local Catchment Management Board, local councils and government agencies (the then Department of Land and Water Conservation, National Parks and Wildlife Service, Environment Protection Authority, NSW Agriculture, NSW Fisheries and NSW State Forests).

In 2001 the Minister for Land and Water Conservation asked the Committee to advise on water sharing rules for a statutory plan. A draft water sharing plan was prepared by the Committee and placed on public exhibition by the Minister in mid-2002.

The statutory plan was made by the Minister for Land and Water Conservation in February 2003. It was based on the recommendations of the Committee, submissions received from the community as a result of the public display of the draft plan, and agreed Government policy. Some amendments were made to the Plan in consultation with the Committee and it commenced on 1 July 2004.

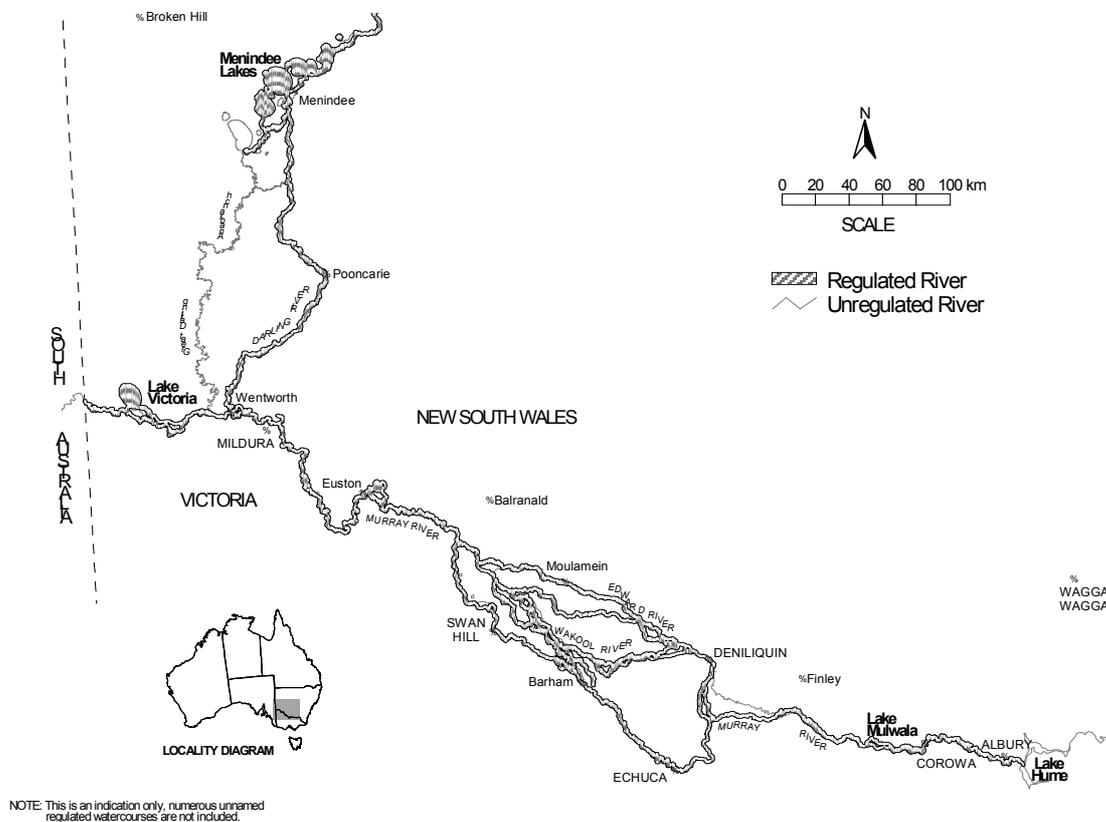
Area of the Plan

The Plan applies to the regulated portions of the NSW Murray and Lower Darling Rivers as shown on the map below.

The NSW Murray Water Source includes the Murray River from the upper limit of Hume Dam storage downstream to the South Australian border, the Edward and Wakool Rivers and a variety of smaller rivers or portions of rivers that receive water from the Murray River.

The Lower Darling Water Source includes the Darling River from the upper limit of the Main Weir storage to the upper limit of the pool that backs up the Darling from Wentworth Weir on the Murray. It also includes the Menindee Lakes and Tandou Creek.

The Great Anabranch receives **replenishment flows** from the Lower Darling but does not form part of the Lower Darling Water Source or the Plan area.



How is water shared in a regulated river?

This chart shows how the rules of the Plan are put into effect and relates these 8 key steps to the *relevant section* in the statutory water sharing plan.

STEP 1 – PROVIDE WATER FOR THE ENVIRONMENT

Establish the volumes of water under NSW control that are to be used for environmental purposes and the management rules that are to be applied to their management.

Part 3– environmental water



STEP 2 – PROVIDE WATER FOR BASIC LANDHOLDER RIGHTS

Estimate total requirements for domestic and stock rights and native title rights.

Part 4– basic landholder rights



STEP 3 – DETERMINE ACCESS LICENCE REQUIREMENTS

Assess the total volume of all access licences and rules for granting of any additional access licences.

Part 6 – requirements for water under access licences, and Part 7 – rules for granting access licences



STEP 4 – SET LIMITS ON WATER FOR EXTRACTION AND SHARE THAT BETWEEN DIFFERENT WATER USERS

Set a limit on the water for extraction on an average yearly basis and the rules for management within these limits. Specify how the water that is available will be shared between all access licences.

Part 8 (Division 1) - long-term extraction limit, and Part 8 (Division 2) – available water determinations



STEP 5 – PROVIDE FLEXIBILITY FOR ACCESS LICENCE HOLDERS

Set rules on how water accounts are to be managed and define the trading arrangements.

Part 9 (Division 2) – water allocation account management, and Part 10 – dealing with access licences



STEP 6 – PROVIDE CLEAR LICENSED RIGHTS

Translate Steps 4 and 5 into mandatory conditions on individual access licences and approvals, and specify any system operation rules, and if and how a plan rule can be amended.

Part 11 – mandatory conditions, Part 12 – system operation rules, and Part 14 – amendment of this Plan.



STEP 7 – MONITOR PLAN

Review the implementation of the Plan each year and audit performance of the Plan mid-term (Year 5).

Part 13 – monitoring and reporting

Vision

The vision of the Plan is to provide a healthy River Murray and Lower Darling system, sustaining communities and preserving unique values.

Environmental water

The Act requires that the sharing of water must protect the water sources and their dependent ecosystems and that water sharing plans establish specific environmental water rules. The ability of the Plan rules to protect the water sources is, however, limited because of the impact of water extractions outside of the area on river flows, the constraints of inter-government agreements and arrangements, and because the Plan can only affect water under direct NSW control.

The main environmental water rules are listed in the shaded box. The environmental water rules are designed to:

1. ensure that there is no erosion of the long-term average volume of water available to the environment during the life of the Plan,
2. improve opportunities for natural regeneration, breeding cycles and ecological processes,
3. increase connectivity between river and floodplain during spring and early summer,
4. promote recovery of threatened species, populations and ecological communities,
5. contribute to expansion and diversification of river bank habitat and maintenance of bank stability,
6. assist in maintenance of ecological health of anabranches and billabongs, and
7. contribute to maintenance or improvement of water quality to downstream environments.

The environmental rules:

1. Prevent erosion of the water available to the environment as a result of growth in NSW water extractions.

- Extractions in each water source are limited to those that would result from the rules in the Plan and current water use development.

2. Provide water to the Barmah-Millewa Forest and other wetlands and increase the frequency of high flows during spring and early summer in the Murray.

- Up to 75,000 megalitres (ML) each year is set aside to build up a reserve of water.
- Releases of water from the reserve are made according to rules that consider flows in the current years and flows over recent years.
- These rules complement those that Victoria will apply.

3. Set aside water for management of blue-green algae in the Lower Darling.

- Maintain a reserve of 30,000 ML whenever water levels are above those where all water must be reserved to ensure future NSW extractive water requirements can be met.
- Water from the reserve can be used when a high blue-green algae level has been declared under the Sunraysia Regional Algal Contingency Strategy.
- **Establish two adaptive environmental water access licences.**
- Two access licences with a total share component of 32,027 units are established.
- Management of water credited to these access licences is to be set out in a protocol developed by the Minister in consultation with the Minister for the Environment.

Basic landholder rights

The Plan provides for domestic and stock rights and native title rights – both forms of **basic landholder rights** that allow some extraction of water from the river without an access licence.

At the commencement of the Plan, domestic and stock water extractions under basic landholder rights are estimated to be 2,100 megalitres per year (ML/yr) in the Murray and 3,700 ML/yr in the Lower Darling. There are currently no native title rights extractions from the water source. However, both forms of extraction may increase during the ten-year term of the Plan.

The water supply system is managed to ensure sufficient water is set aside to supply basic landholder rights.

Requirements for water under access licences

All water extraction, other than that occurring under basic landholder rights, must be authorised by an **access licence**. Each access licence specifies a **share component**. The share components of specific purpose licences such as local water utility and domestic and stock are expressed as a number of megalitres per year. The share components of licences such as high security, general security, conveyance and supplementary water access licences are expressed as a number of unit shares.

The following table lists the categories of access licences in the water sources and their estimated total share component at the start of the Plan:

Access Licence Category	Share Component	
	NSW Murray	Lower Darling
general security	1,953,508 unit shares	30,288 unit shares
high security	198,011 unit shares	7,999 unit shares
Conveyance	330,000 unit shares	0 unit shares
supplementary water	252,361 unit shares	250,000 unit shares
Domestic and stock	14,518 ML per year	601 ML per year
Local water utility	33,336 ML per year	10,160 ML per year

Murray Irrigation Limited's water delivery losses within their supply area were historically met from water allowances set aside before allocation announcements were made. This arrangement is replaced by a 300,000 ML conveyance access licence.

Two access licences are also established for adaptive environmental purposes. These comprise an access licence under the conveyance category of 30,000 unit shares and a high security access licence of 2,027 unit shares.

Supplementary water access licences are now needed to take water that was previously termed "off-allocation".

The share component within each access licence category may change during the term of the Plan due to:

- the granting, surrender or cancellation of access licences,
- conversion of access licences from one category to another,
- trading of access licences between the Murray and Lower Darling and other water sources, or
- increases in the share component of local water utility access licences following population growth.

Granting access licences

An **embargo** on applications for new commercial access licences has been in place for the Murray and Lower Darling Rivers for many years. The only applications permitted for new access licences are for those categories or sub-categories specified in either the regulations to the Act or in the Plan.

Applications permitted in the New South Wales Murray and Lower Darling Regulated Rivers Water Sources are for:

- a local water utility access licence, or
- a domestic and stock access licence (subcategory “domestic”) for the purpose of domestic consumption, or
- a high security access licence (subcategory “town water supply”) for the purpose of supply to communities for domestic consumption and commercial activities, or
- a specific purpose access licence (subcategory “Aboriginal cultural”) for Aboriginal cultural purposes, or
- a high security access licence (subcategory “Aboriginal cultural”) for Aboriginal cultural purposes, or
- an access licence to replace the current replenishment flow arrangements for the Great Anabranch, or
- a high security (subcategory “research”) for the purpose of research by an accredited research body, or
- an access licence resulting from the Snowy Water Inquiry, or
- an access licence with a zero share component, or
- a replacement access licence as a result of **access licence dealings**.

Long-term extraction limit

In general, water extractions can increase through:

- existing access licence holders using more of the water they are allocated as a result of increases in crop area, changes in crop type or watering practices, or the construction of on-farm water storages,
- the sale and subsequent activation of currently unused access licences or unused share components,
- the sale and subsequent use of currently unused water allocations, and
- the granting of new licences.

An increase in water extraction would threaten the environmental objectives of the Plan, increase year-to-year variations in water supply and worsen the impact of droughts. To prevent this, the Plan establishes a long-term **extraction limit** and rules for adjustment of the maximum amount of water that may be made available if this limit is being exceeded.

The long-term extraction limit is set at the average annual volume of extraction that would occur with the water storages, access licence share components and water use development that existed in 2000/2001, and the water management rules in the Plan.

Compliance with the long-term extraction limit is to be determined using a computer model of the NSW Murray and Lower Darling system. If the model's results indicate that long-term average annual extractions are in excess of the limit, the volume made available to access licences must be reduced.. Supplementary water access licences are to be reduced first, then, if necessary, the volume made available to general security access licences.

Available water determinations

Available water determinations are the means by which water is shared between access licences. Available water determinations are made for each access licence category in the NSW Murray and in the Lower Darling at the start of the **water year** and, if required, during the course of the year.

The water sharing rules set by the Plan, and the very high reliability of inflows from the Snowy Mountains Scheme, mean that:

- available water determinations for domestic and stock access licences and local water utility access licences in both water sources should provide allocations equal to 100% of their share component in all years,
- available water determinations for high security access licences in the NSW Murray should provide allocations of water equal to at least 0.97 megalitres per unit share in all years and 1 megalitre per unit share in years when general security access licences also receive 1 megalitre per unit share, and
- available water determinations for high security access licences in the Lower Darling should provide allocations equal to 1 megalitre per unit shares in all but the most exceptional drought years.

The water made available to general security access licences in both water sources, but particularly in the NSW Murray, varies from year-to-year depending upon the amount of water held in the storages and whether more water becomes available during the water year.

The maximum volume that may be extracted over a water year by each **supplementary water** access licence is set by an available water determination made at the start of each water year. Extractions are also subject to announcements (see *Extraction conditions for supplementary water access licences*).

Water allocation accounts

A water allocation account is kept for each access licence. Water is credited to the account when an available water determination is made, or when water allocation is moved into the account from another access licence. Water is debited from the account when water is extracted or moved to another access licence.

The accounts of all categories of high priority access licences (high security, domestic and stock, and local water utility) and conveyance access licences continue to be managed on an annual basis. This means that any water that remains in an account at the end of a water year is lost. The account receives a new allocation of water in the next water year.

More complex rules apply to general security access licences. The rules provide opportunity for these access licence holders to reduce year-to-year water availability variations by:

- permitting extractions during periods when supplementary water access is declared without debit to the general security account whenever the sum of available water determinations during a water year is less than 0.6 megalitres per unit share, and
- allowing the ‘carry over’ of unused water allocations from one water year to the next – with a limit equal to 0.5 megalitres multiplied by the number of unit shares, applying to most general security access licences in the water sources.

Limits also apply to the volume that can be credited to general security access licences from available water determinations in the next water year. In the NSW Murray, the limit is equal to 1.1 megalitres per unit share, minus the volume of water allocation carried over from the previous water year. In the Lower Darling, the limit is equal to 0.5 megalitres per unit share, minus the volume carried over from the previous water year. Specific carry-over provisions for the Lower Darling are detailed in the statutory plan and relate to the accounting of losses.

Extraction conditions for supplementary water access licences

Extraction of water under supplementary water access licences is only permitted in accordance with announcements made by the Department. These announcements specify when water can be taken and the maximum volume that can be taken over the period.

Extractions are only be permitted when flows are in excess of those required:

- under the Plan’s environmental water provisions,
- for water quality and other specified environmental purposes,
- to supply domestic and stock and native title right requirements,
- to provide for higher priority access licence requirements,

- to provide specified replenishment flows, and
- when flows cannot be stored in Lake Victoria or used to supply South Australia.

The total volume that may be extracted over a water year by each supplementary water access licence is limited to the available water determination made at the start of the water year.

Access licence dealing rules

Access licence dealings or water dealings can include the following:

- sale or transfer of the ownership of an access licence (called a ‘transfer’),
- change in the location where a water access licence can be used
- sale of the share component of an access licence (called assigning share component)
- subdivision or consolidation of access licences
- sale of allocation water (called an ‘assignment of water allocation’),
- change in the category of an access licence (called a ‘conversion’)
- rental of a water access licence (called a ‘term transfer’).

For more information on the types of water dealings and their applications forms refer to the information on *Water dealings* on DIPNR’s website.

In water sources, such as the NSW Murray and Lower Darling, where applications for new access licences are restricted to a limited number of categories (see *Granting access licences*), water dealings are essential for business flexibility and development. Rules that regulate dealings are, however, required for practical management reasons and to protect the environment and the interests of other access licence holders.

The Plan prohibits:

- movement of NSW Murray access licences from upstream of the Barmah Choke (taken as the Murray River downstream of the Gulpa Creek offtake at Picnic Point) to downstream of the Barmah Choke,
- assignments of water allocations from upstream to downstream of the Barmah Choke if this will diminish the ability to fully supply orders for water downstream of the Choke, and
- movement of access licences or assignment of water allocations between the water sources and any water source in NSW other than the Murrumbidgee or an unregulated catchment in the Murray (trading and assignment between the NSW Murray and the Lower Darling is permitted).
- trading of supplementary water access licences or their water allocations between water sources.

The Plan permits trades of access licences or water allocations to other states. Such trades are, however, subject to interstate agreements.

Conversion of access licence category is allowed for domestic and stock to domestic and stock (domestic only) and domestic and stock (stock only), domestic and stock (stock only) to high security, high security to general security, general security to high security, and conveyance to either high security or general security.

Access licence category conversions and trades between water sources are subject to conversion factors and other rules that must ensure that other licences do not lose water as a result of the dealing.

Mandatory conditions

The Plan sets out a number of conditions that are applied to access licences and **water supply work approvals**.

System operation rules

The Plan deals with operational matters that affect the quantity and supply of water in the NSW Murray Regulated River and Lower Darling Regulated River. The rules:

- provide for replenishment flows of up to 50,000 ML/yr to be supplied from Lake Cawndilla to the Great Anabranch, and
- recognise the existing Murray-Darling Basin Agreement rules that apply to operation of water storages in the water sources.

Monitoring and reporting

The Plan includes indicators against which the performance of the Plan is to be monitored to determine if it is meeting its objectives. The Plan is to be audited at least every five years. The Natural Resources Commission is to undertake a review of the Plan prior to any decision to extend its term or to make a new plan.

In addition, an Implementation Program is to be established setting out the means by which the provisions of the Plan are to be achieved. The effectiveness of the Implementation Program is to be reviewed each year and the results reported in the Department's Annual Report.

Plan amendments

Water sharing plans recognise the need for some certainty regarding the water preserved for environmental purposes and the water available for extraction. However, during the term of the Plan, some amendments may be needed. The Plan allows for:

- the addition or deletion of sections of rivers to or from the water sources,
- changes to the release and borrow rules applying to the Barmah-Millewa environmental water allowance,
- changes to the available water determination rules for conveyance access licences to better match actual water losses, and
- replacement of the Great Anabranch replenishment rules with alternative provisions.

Additional information

Should you require further information on water sharing in the NSW Murray and Lower Darling Regulated Rivers, or a copy of the statutory plan, please contact:

Department Office: Albury (02) 6041 6777 or Deniliquin (03) 5881 9200

Internet site: www.dipnr.nsw.gov.au

Email: wma.info@dipnr.nsw.gov.au

Freecall ☎ 1800 353 104

Note: This information does not constitute formal legal advice.

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Glossary of terms

access licences allow the licence holder a share of the available water in the water source. An access licence is separate from the approvals to use the water or to construct and operate the works to extract the water eg pump, dam. Access licences do not have to be renewed.

access licence dealing or a water dealing refers to a change that can be made to a licence, in particular, those arising from trading including the sale of all or part of an access licence or account water. Other possible dealings include a change in the location from which water is extracted, the licence category or the consolidation or subdivision of licences.

available water determinations (AWDs) are the means by which water is shared between access licences each year. An available water determination adds volumes of water (ie water allocations) to the water accounts of all access licences in the licence category. The volume of water allocated to a water account is calculated by multiplying the number of unit shares on the licence by the volume per share stated in the AWD. The available water determination also ensures that long-term extraction does not exceed sustainable limits.

basic landholder rights cover three types of rights that do not require a licence. The first allows rural landholders along the river frontage to extract water for domestic household and stock watering purposes (domestic and stock rights) without an access licence. Domestic and stock rights replace riparian rights under the *Water Act 1912*. The second allows Aboriginal native title holders to take water in the exercise of native title rights for a range of personal, domestic and non-commercial communal purposes. Native title holders are as determined under the Commonwealth's *Native Titles Act 1993*. The third component is the harvestable right which allows landholders to capture a portion of the runoff from their land in farm dams. The term basic landholder rights covers all these rights, although harvestable rights do not involve extraction from the river and so have not been provided for in the plan.

extraction component is part of the access licence, and will specify the sections of the water source from which water may be taken and may, at some time in the future, also specify the rate at which water can be taken when water delivery rates are limited.

extraction limit is the average yearly volume of water that can be extracted from the water source by all access licences.

replenishment flows are flows provided to refill pools or water holes in effluent systems downstream of a water source and provide water for household and town use and stock.

share component is specified on the access licence, this is similar to the entitlement volume on previous water licences and is expressed as a unit share or in the case of specific purpose licences (such as local water utility, major water utility and domestic and stock) a volume in megalitres. The amount of water a licence holder is allocated as a result of an available water determination and the amount they can take in any year is based on their share component.

supplementary water is a new licensed right which replaces access to "off-allocation" water and Special Additional Licences and High Flow Authorities. Holders of supplementary water access licences are able to extract water during announced periods when flows exceed those required to meet other licensed obligations and environmental needs. This is typically during periods when the dam is spilling or as a result of high tributary inflows downstream of a dam.

water supply works approval authorises the construction and operation of water supply works at specified locations.

water year is the 12 months running from 1 July to 30 June.