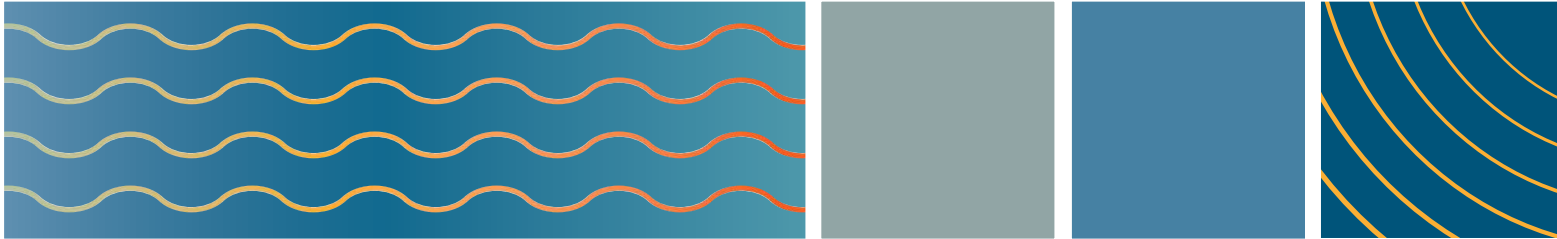


WATER SHARING PLAN

NSW Border Rivers regulated river water source

Guide

June 2009



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Introduction

This Guide provides an explanation of the main sections of the *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2009* (the Plan). It is intended to assist you in understanding the gazetted plan. The guide should be read in conjunction with the actual plan.

Once the water sharing plan commences on 1 July 2009, the licensing provisions of the *Water Management Act 2000* will come into effect in the water sharing plan area. This means that former *Water Act 1912* licences are converted to *Water Management Act 2000* water access licences and approvals.

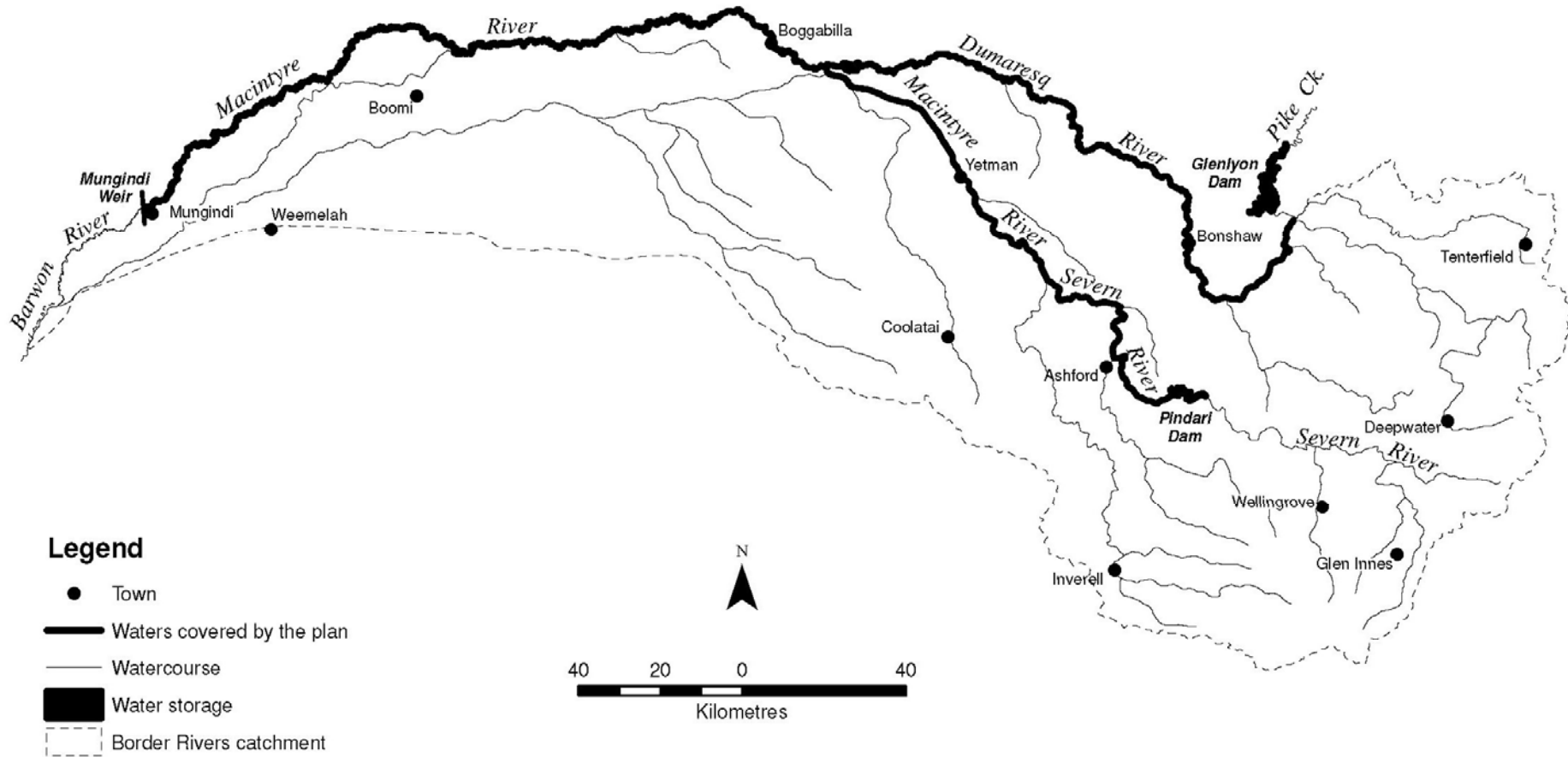
The *Water Management Act 2000* introduces new terminology and some new management arrangements. These new terms are highlighted in the text and explained in a glossary of terms at the end of this Guide.

Plan area

The NSW section of the Border Rivers catchment is located south of the NSW/QLD border and has an area of approximately 24,000 kilometres² (km). The NSW section is approximately 400 km from east to west and 100 km from north to south. The catchment is bounded by the Queensland border to the north and west, the Gwydir Catchment to the south and the Great Dividing Range to the east. The major river systems are the regulated Dumaresq, Severn and Macintyre Rivers and the unregulated Tenterfield Creek, Mole River, Severn River, Macintyre River and Frazers Creek.

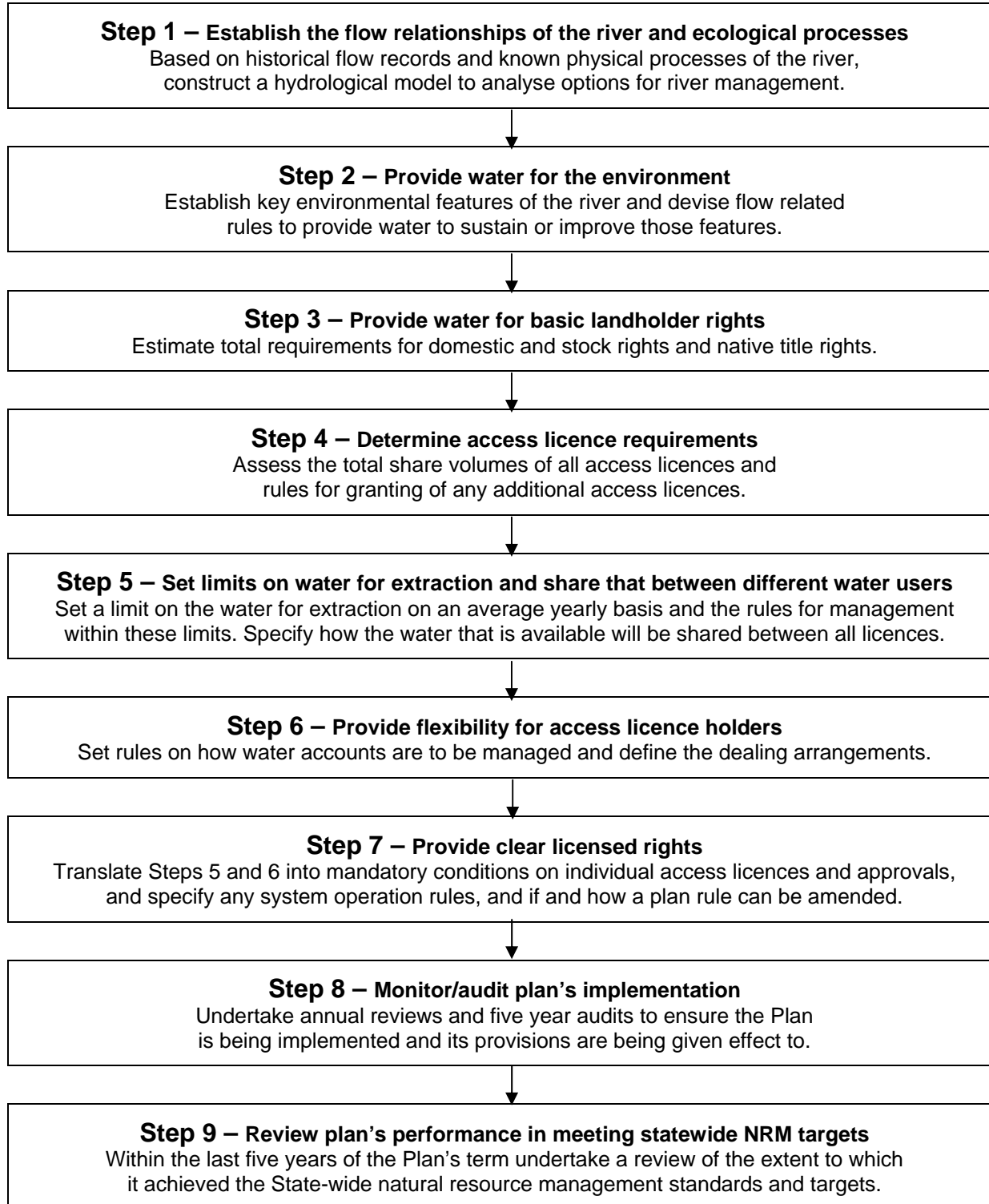
The Plan applies to all regulated river sections in the NSW Border Rivers Water Management Area. This includes the upper limit of Pindari Dam including all tributaries downstream to the junction of the Severn River with the Macintyre River, the Macintyre River from its junction with the Severn River to the junction of the Barwon River, the Barwon River downstream to Mungindi Weir and the Dumaresq River from the junction of Pike Creek to the junction of the Macintyre River (refer Figure 1).

Figure 1: NSW Border Rivers Water Management 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 nine key steps to the relevant section in the Plan.



Basis for water sharing

Growth in water extractions in most of the major inland regulated rivers in NSW between the mid 1980s and mid 1990s was in the range of one per cent to three per cent per year.

Growth in water extractions occur for one or more of the following reasons:

- An increase in activation of previously unused licensed entitlements.
- Increased development of active licensed entitlements.
- Harvesting of overland flows.
- Growth in use by towns.
- New licences.

Such growth may lead to the following undesirable outcomes:

- A weakening of efforts to protect and restore the health of our rivers and undermining of environmental flow rules, which are based on the level of diversions and impact on the flow regime.
- Reduction in flows from upstream river systems into downstream systems.
- Reduction in the reliability of water available to existing consumptive users.

In 1995 the State Governments in the Murray-Darling Basin and the Federal Government agreed that a Cap should be placed on future water extractions. The NSW Border Rivers is a special case with regard to Cap because the Pindari Dam enlargement was under construction prior to the cap benchmark year of 1993–94, but was not completed until after it was applied to other catchments. It was therefore agreed that the Cap for the NSW Border Rivers will be based on the long-term annual average water extraction based on the 1993–94 level of development and management plus an allowance (uplift factor) for the enlarged Pindari Dam. The Cap is aimed at preventing further growth in extractions and further deterioration in overall flow regimes in the water source.

The Plan has defined specific environmental flow rules which will improve flow regimes and provide a better balance between river health and water diversions. To ensure that the defined environmental flow rules are not eroded it has been necessary to set a long term average annual extraction limit (LTAAEL). The LTAAEL corresponds with the long term average annual water extractions based on the development in November 1999 and must not exceed the Murray-Darling Basin Cap.

As water sharing plans are generally set for a 10 year period¹, or longer on the recommendation from the Natural Resources Commission, it is essential that they include a clear strategy for responding to any growth in diversions. The strategy is an important component of the definition of licence holder's rights to access water over the life of the Plan.

In all Murray-Darling systems, including the Border Rivers, water sharing plans must establish a long term extraction limit (LTAAEL) that does not exceed long term extractions under the Murray Darling Basin Ministerial Council Cap.

The Plan's LTAAEL is equal to the long-term average water diversion based on the level of water use development that existed in 2001–02, the share components that exist at plan commencement and the rules in the Plan.

¹ Note that under the Commonwealth Water Act 2007 plans made within the Murray Darling Basin, on or after 25 January 2007, and before the Basin Plan first takes effect, cease to have effect at the 31st of December 2014 or the time occurring 5 years after the plan is made; whichever is later.

The Murray Darling Basin Ministerial Cap is equal to the long-term average water diversion that would occur based on the level of development and management as agreed under the Murray Darling Basin Agreement.

The *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2009* has established a LTAAEL within the framework of the New South Wales – Queensland Intergovernmental Agreement on Water Management in the Border Rivers (IGA).

Environmental water

The *Water Management Act 2000* recognises two classes of environmental water.

These are:

- **Planned environmental water** – water that is committed by management plans for fundamental ecosystem health or other specified environmental purposes, either generally or at specified times or in specified circumstances, and that cannot, to the extent committed, be taken or used for any other purpose.
- **Adaptive environmental water** – water that is committed by the conditions of access licences for specified environmental purposes, either generally or at specified times or in specified circumstances.

The Act requires this Plan to define rules for the identification, establishment and maintenance of Planned Environmental Water and to contain provisions that relate to Adaptive Environmental Water.

Environmental water for the river section from Pindari Dam to the junction of the Severn River with the Dumaresq River was negotiated through the NSW Border Rivers Regulated River Management Committee process. Environmental water for the remainder of the NSW Border Rivers Regulated River Water Source was defined in the IGA.

Planned environmental water

To manage Planned Environmental Water, the following environmental water rules have been included in the Plan:

1. Continuous low flow rule

Maintain a minimum release of 10 megalitres (ML) per day from Pindari Dam.

The continuous low flow rule will provide the following benefits:

- Riparian flow.
- Connectivity of downstream pools/riffles.
- Partial acknowledgment effect of Pindari Dam on curtailing extended recession.

2. Translucency rule

‘Translucency’ refers to the immediate release of specified inflows into the dam.

The translucency arrangements are as follows:

- Pass inflows up to 50 ML/day during September to May.
- Pass inflows up to 200 ML/day during June to August.

The translucency arrangements are intended to provide the following benefits:

- A reflection of natural flows downstream to the next point of significant inflow (Frazers Creek near Ashford).
- Best outcome for ecological features in the system.
- A consistent, deliverable and auditable arrangement.

3. Stimulus flow rule

The stimulus flow is a pulse of water released from Pindari Dam to stimulate natural ecological processes.

The stimulus flow arrangements are as follows:

- 4,000 ML shall be set aside at the start of each water year for the purposes of a stimulus flow.
- The stimulus flow shall be released between 1 August and 1 December each water year, triggered by an inflow greater than 1,200 ML/day into Pindari Dam in the preceding months of April, May, June, July or August.
- The timing, rate, volume and duration of the stimulus flow shall be determined by the Department and the Department responsible for the Environment.
- Water set aside for a stimulus flow but not released shall be carried over to the succeeding water year to a maximum volume of 8,000 ML.

The stimulus flow rule is intended to provide the following benefits:

- A flow in the river that mirrors a naturally occurring hydrograph.
- Add benefit to any translucency environmental health releases.
- Targeted pre-season cues to fish breeding.
- Regularly wet and inundate the interconnected riparian areas primarily in the river downstream of Pindari Dam to the confluence with Frazers Creek.
- An opportunity for more extensive stimulus flows in the system which will extend aquatic benefits further downstream into the known sites of significance to Holdfast.

This plan also recognises that the Minister, under Section 324 of the Act, can declare under extreme emergency circumstances that a greater share of the flow can be maintained in this Water Source for the environment and human safety.

Instances where this may apply include, but are not limited to:

- i. algal blooms that threaten human and animal health
- ii. chemical or other contaminant pollution (including excessive concentration of naturally occurring salts) where dilution flow is required.

Adaptive environmental water

Any water held as part of an access licence which is committed for environmental purposes, either generally or at specific times or in specific circumstances, can either be excluded from extraction, or extracted for enhancing the ecology of a water dependent ecosystem within the conditions of a water use approval.

At the commencement of this plan there are no access licences committed for environmental purposes in the NSW Border Rivers Regulated River Water Source.

Basic landholder rights

Under the *Water Management Act 2000*, extraction of water for basic domestic and stock rights from a river fronting a landholder's property or from any aquifer underlying the property and for native title rights (known collectively as **basic landholder rights**) does not require a water access licence. Although in the case of groundwater, the bore must still be approved by the Department.

The supply of water for basic landholder rights has priority over licensed extraction. An estimate of the water requirements for domestic and stock rights is provided in the Plan. There are currently no extractions for native title rights in NSW. These restrictions are outside the framework of the Plan. However, these rights may occur or increase during the Plan's ten-year term.

Domestic and stock rights can be restricted by the Minister to protect the environment, for reasons of public health, or to preserve existing basic landholder rights. The Department is developing a regulation which will limit extractions under basic landholder rights to a reasonable use volume.

Requirements for water under access licences

Except for basic landholder rights, all other water extraction must be authorised under a water **access licence**. There are a range of different categories or sub categories of access licence such as domestic and stock, town water supply, regulated river general security, regulated river high security, and supplementary water.

The Plan estimates the total entitlement or **share component** for each category of access licence that applies at the start of the Plan. The share components of specific purpose licences such as local water utility, domestic and stock and Aboriginal cultural are expressed as a number of megalitres per year. In contrast, the share components of regulated river high security and general security access licences are expressed as a number of unit shares in the available water.

During the term of the Plan, the total share component may change because of the granting or cancellation of access licences, or variations to local water utility access licences. Towns may be granted an increased share component as a result of population growth and they may receive credits, in certain circumstances, for water returned to the water source from treated effluent.

Granting access licences

Other than through the purchase of a water access licence or share component on the water market, applications for the granting of additional water access licences will only be considered for local water utility or town water supply, domestic or Aboriginal cultural purposes.

Long-term average annual extraction limit

A **long-term average annual extraction limit** will be set as part of the Plan. This is set at the average annual volume of extraction that would occur with the water storages in place, access licence share components and water use development that existed in 2001–02, and the water management rules in the Plan.

Compliance with the limit is to be determined using a computer model of the Border Rivers Regulated River. If this indicates that long-term average annual extractions are in excess of the Plan's limit, then the maximum volume of water made available to supplementary water access licences and, if necessary, general security access licences will be reduced.

Available water determinations

Each year, **available water determinations** will be made defining how much of the share component will be available under each category of licence. Specific purpose access licences such as; domestic and stock, local water utility, and major water utility access licences, will generally always receive 100 per cent of their share component, although in years of exceptional drought daily access rules may limit extraction so that the full annual entitlement cannot be realised. In all but the most exceptional drought years, these allocations of 1 ML per unit share for high security access licences would also be expected. The water made available to general security access licences, however, varies from year to year depending upon the amount of water held in Pindari and Glenlyon Dams and whether more water becomes available during the year. The AWD for general security access licences is reviewed monthly or whenever significant inflows occur.

An available water determination of less than 1 ML per unit share may be made if the long-term average annual extraction limit is exceeded. This means that general purpose access licences may in the future, if there is significant growth in water use receive fewer megalitres in their water account than they have shares.

Water allocation accounts

A water allocation account has been established for each access licence. Water is credited to the account when an available water determination is made, and debited when water is extracted.

The accounts of all domestic and stock, local water utility, high security and supplementary water access licences will be managed on an annual basis. This means that any water that remains in these accounts at the end of a water year is forfeited. The account receives a new water allocation in the next water year.

Water remaining in the accounts of general security access licences at the end of a water year will be carried over to the next water year.

The maximum volume of water that may be taken under a general security access licence in any water year is equal to 1 ML per share specified in the respective share component.

Extraction conditions for supplementary water

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 may be taken over the period.

In the past, extractions of supplementary water have been termed 'off-allocation' because the water taken was not counted against the licence holders regulated supply water allocation. It was, however, metered and accounted for as a component of total diversions.

Supplementary water is a significant and vital source of supply for NSW Border Rivers regulated river licence holders. It is an integral part of the package that determines total water availability and hence reliability of supply. Tributary inflows are also important for the maintenance of river and wetland health. Because they are naturally occurring high flows, they provide the environmental triggers (seasonal and temperature) for spawning and migration of fish, and can result in wetland inundation. The way in which supplementary water is managed, therefore, has important environmental and productivity consequences.

Under the *Water Act 1912*, the Department had wide discretion when it declared off-allocation periods and how it managed access. The *Water Management Act 2000* now requires that access to supplementary water be licensed. This means that the rules for identifying this water and allowing access must also be clarified so that its management can be consistent.

The Plan specifies the rules that govern supplementary water licensing and management.

Supplementary water access licences will be issued to all regulated river (general security) access licence holders. The total amount of supplementary water access licence share components has been limited to 120,000 shares. The 120,000 shares have been distributed to individual supplementary water access licences in proportion to the size of the holder's regulated river (general security) access licence share component.

Supplementary water access licences will be totally independent of general security access licences, that is, they will be separately tradeable shares and water allocations.

Supplementary water access may only be permitted after other needs (environmental and supply to all other regulated river licences) have been met.

This reflects the existing circumstances that must now occur before off-allocation periods are declared.

In general, access rules for supplementary water will be different for the river sections upstream of the Macintyre/Dumaresq junction and the main river downstream of the junction in recognition of the fundamentally different circumstances that apply. Upstream, small volumes of supplementary water are pumped direct onto crop on the recession of flows when low level pumps are able to be put back in position. Downstream, flows are able to be pumped into on farm storages at any stage of the flow.

The taking of water under supplementary water access licences shall not be permitted or shall be restricted when required to ensure flows are available to meet the requirements of the Interim Unregulated Flow Management Plan for the North West.

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 extracted and used.
- Sale (called an 'assignment') of the share component or extraction component of an access licence.
- Subdivision or consolidation of an access licence.
- Sale of account 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 access licence dealings refer to the section on water dealings on the Department's website www.dwe.nsw.gov.au.

Dealings between NSW and QLD will be permitted once administrative and accounting arrangements are finalised between the two States.

Mandatory conditions

The Plan sets out a number of standard conditions that will be applied to water access licences and water supply work approvals. These mandatory conditions are designed to protect the rights of all users in the water source and the environmental water rules of the Plan. They cannot be removed unless the Plan itself is amended.

System operation rules

The Plan provides rules on a number of miscellaneous operational matters that affect the quantity and supply of water in the NSW Border Rivers Regulated River Water Source. These include:

- Replenishment flows up to nominated maximum volumes to a number of river effluents.
- Operation of the dams during times of flood and spilling of water.
- 'Grouping' of releases to meet supply needs during extended drought periods.

Monitoring and reporting of Plan performance

The Plan includes performance indicators against which the performance of the Plan will be monitored to determine if it is meeting its objectives. The implementation of the Plan will be audited every five years. The Natural Resources Commission, an independent authority established by the Government, must 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 may be established setting out the means by which the provisions of the Plan will be achieved. This implementation program is to be reviewed each year and the results reported in the Department's Annual Report.

Plan amendments

An important aspect of a water sharing plan is that it provides certainty to licence holders in terms of their access to water over the next ten years. However, during the term of the Plan, amendments in particular may be made to add or delete sections of rivers to or from the water source. These possible amendments are listed in the Plan.

Glossary of terms

access licences provide the holder with a share of the available water in a water source. The **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, e.g. 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 accounts of all access licences in the licence category. The volume of water allocated to an 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 right 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.