



A Guide to the
Water Sharing Plan for the
Wybong Creek Water Source

(as amended 1 July 2004)

Additional information

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.

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Introduction

This guide provides an explanation of the main sections of the Water Sharing Plan for the Wybong Creek Water Source gazetted on 21 February 2003 and including the amendments gazetted on 1 July 2004. The Plan commenced on 1 July 2004 and applies 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 (DIPNR).

The water sharing rules allocate water for the environmental needs of the water source and direct how water is to be shared among different water users. For commercial water users, the water sharing rules are quite different to the pre-plan arrangements. The changes are necessary to provide adequate protection for the environment, particularly during periods of low flow when the demand for water is greatest, and to more clearly define the rights of individual licence holders. However, a number of the Plan's provisions will be phased in over time as the required gauging and metering systems are put into place.

Many technical aspects of the water sharing rules are quite complex, and are not fully addressed in this summary guide. For specific details of the rules you will need to refer to the statutory plan (see *Additional information*). 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 provided at the back cover of this guide.

Background

The Wybong Creek Water Source runs north-south with long sloping flanks from the catchment boundaries. The Wybong Creek lies toward the centre of the catchment and is the most eastern of the northern tributaries of the Goulburn River. The headwaters of the catchment are in the Liverpool ranges to the north. A narrow strip of alluvial fill composed of sand or boulders with minor clay lenses is associated with the water source.

The river and groundwater are highly connected. While the alluvium is essentially continuous and has a significant store of water, groundwater extraction impacts on river flow. Equally, extraction from a water hole in the Creek bed will access groundwater. The Plan therefore covers extractions from both surface and groundwater sources.

The flow in Wybong Creek has been measured at Yarraman since 1955, with the accuracy of the measurements and the availability of information improving from 1992 when the telemetry system was upgraded. The hydrological data used in developing the Plan included actual and modelled flows.

Wybong Creek has considerable variation in its annual and daily flows. In dry periods, the water-bearing aquifers will contribute flow to the Creek for a considerable period. However, the upstream flow has to fill the alluvial storage that is depleted by evapo-transpiration effects before a flow at the gauge occurs.

At the start of the Plan, there were 124 water **access licences** with about 8,300 megalitres (ML)/year in water entitlements. Of this annual volume, about 8,200 ML was for irrigation and 100 ML for domestic, stock and farming purposes. Some groundwater licences had not been converted to volumetric licences at the time of the commencement of the Plan.

The Plan recognises Wybong Creek as an area of importance for the Kamilaroi, Geawegal and Wanatuah people. In the past, the Creek has been not only a source of food but also of spiritual and cultural significance for indigenous communities.

Development of the Plan

A draft plan was prepared by the Hunter River Management Committee and placed on public display during 2002. The Committee included representatives of water users (dairy, grazing, vigneron, mining and power industries), environmental interests, indigenous communities, the Hunter Catchment Management Trust, local councils and government agencies (the then Department of Land and Water Conservation, National Parks and Wildlife Service, Environment Protection Authority, NSW Agriculture and NSW Fisheries). During the development of the draft plan, the Committee held public meetings and forums with local water users.

The Plan was made by the Minister for Land and Water Conservation. It was based on the recommendations of the Hunter River Management Committee, the submissions arising from the public display of the draft plan and agreed Government policy. Some subsequent amendments were made to the Plan and it commenced on 1 July 2004.

Area of the Plan

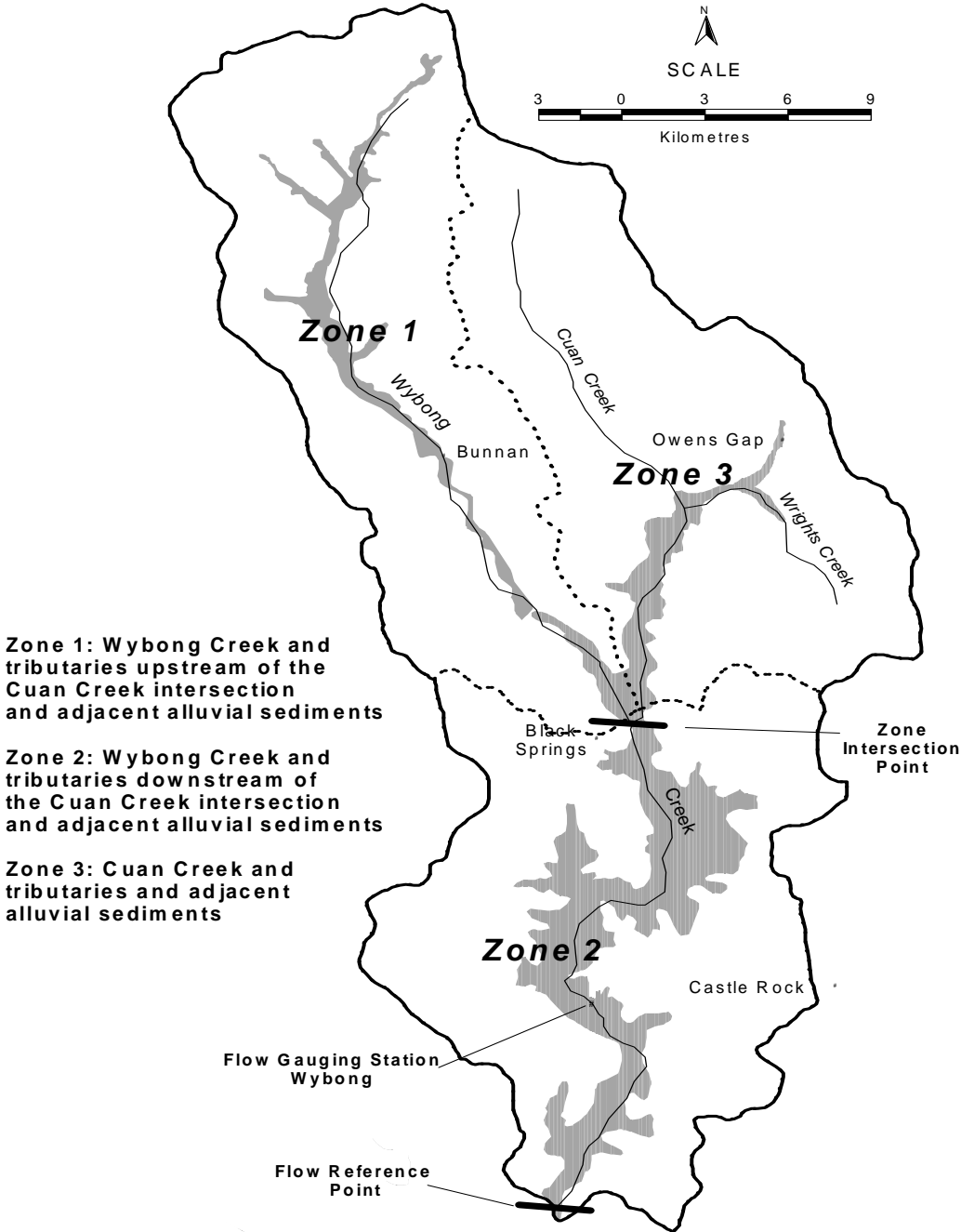
The Plan applies to the Wybong Creek and its tributaries, as shown on the map. The water source has been divided into three management zones:

Zone 1 – Wybong Creek and tributaries upstream of the Cuan Creek intersection and adjacent alluvial sediments,

Zone 2 – Wybong Creek and tributaries downstream of the Cuan Creek intersection and adjacent alluvial sediments, and

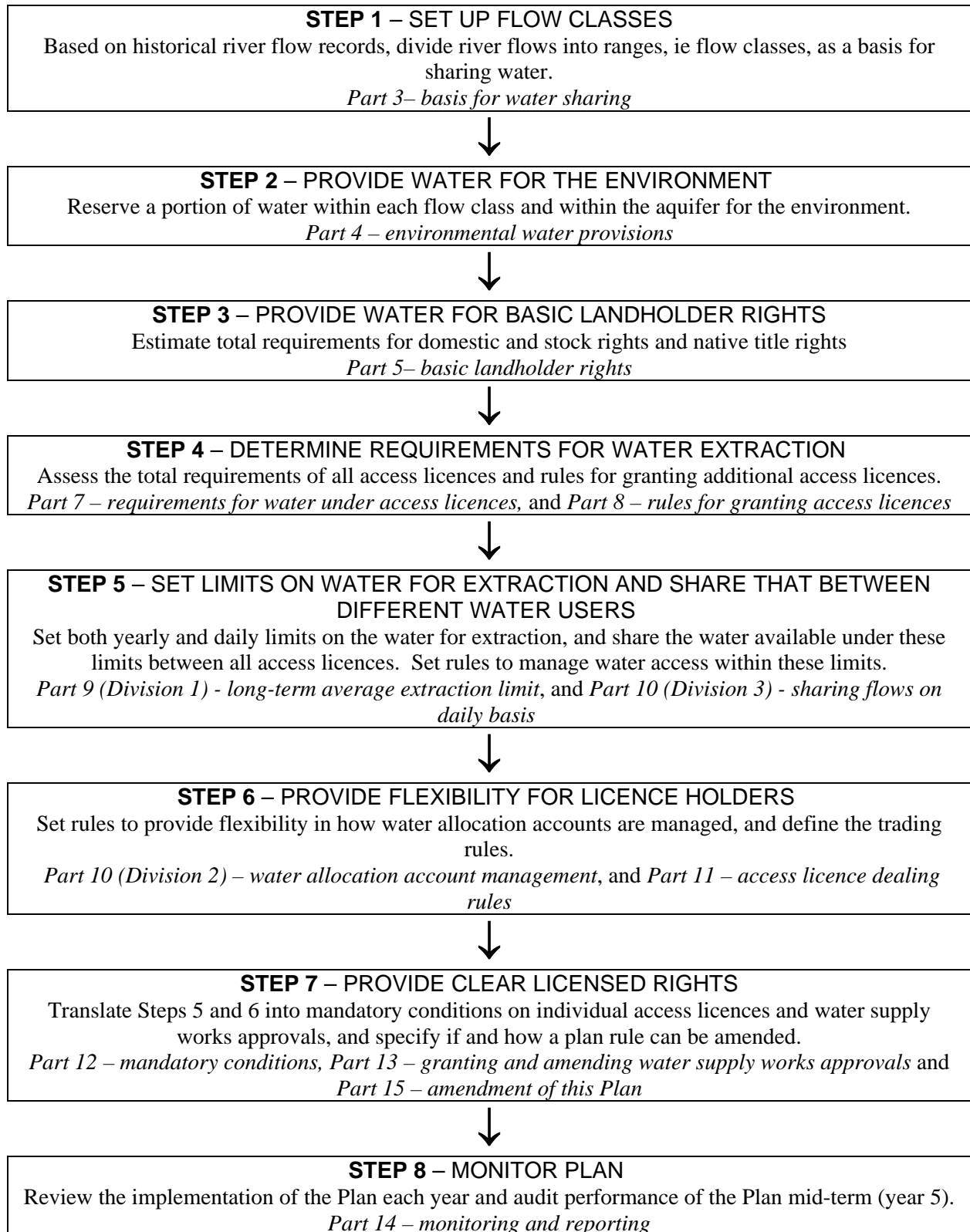
Zone 3 – Cuan Creek and tributaries and adjacent alluvial sediments.

MAP: Wybong Creek water source



How is water shared in unregulated rivers?

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.



Vision

The vision of the Plan is a healthy, diverse and productive water source providing sustainable management of the water source for the community, environment, agriculture and industry. The Plan specifies objectives and the following provisions to meet these objectives.

Basis for water sharing

Wybong Creek is regarded as a stressed river. This means that, relative to the natural flows in the Creek, the potential demand for extraction by water users is high. If everyone pumped water at the same time there would not be enough water for all existing water users and the environmental needs of the Creek and aquifer.

Climate and river flows, and therefore the water available to meet all competing needs, vary from year-to-year and day-to-day. The Plan sets a limit, or a cap, on overall extractions on an annual basis (the long-term average **extraction limit**) and also limits on daily extractions (**total daily extraction limit - TDEL**).

An important point in relation to the long-term average extraction limit is that it is determined as one figure for the whole of the unregulated river catchments in the Goulburn Valley, not just for an individual water source such as Wybong Creek. Extractions across this whole area – the Goulburn Extraction Management Unit – will be monitored and any controls on annual extractions will be implemented across the Unit (this is discussed further in the section on the *Long-term average extraction limit*).

Over time, daily extractions will be managed and controlled within the water source. This will be done through a series of **flow classes** covering the full range of flows that can occur in Wybong Creek on a daily basis. These flow classes will be introduced as the appropriate gauges and meters are installed. DIPNR will notify licence holders when the flow classes will commence.

The flow classes, as measured at the flow reference point located at the downstream end of the water source, in the Wybong Creek water source are:

Very low flow class:

Flows less than 1 ML/day on a rising river, and 0.5 ML/day on a falling river.

Medium flows or B class:

Flows between 1 and 7 ML/day on a rising river, and 0.5 and 7 ML/day on a falling river.

High flows or C class:

Flows between 7 and 16 ML/day.

Very high flows or D class:

Flows between 16 and 100 ML/day.

Extremely high flows or E class:

Flows greater than 100 ML/day.

Within each of these flow classes, the Plan defines how much water can be extracted under each category of water access licence. This is the **total daily extraction limit** (TDEL).

Environmental health

The Act requires that water be allocated for the fundamental health of a river and its associated aquifer and their dependent ecosystems, such as instream pools, wetlands and floodplains, as a first priority. The Plan does this by setting aside a proportion of both natural river flows and the average **annual recharge** of the aquifer for environmental needs.

In particular, the maintenance of water in the Creek during the very low flow periods is essential to provide refuge areas for fish and aquatic species. A cease to pump condition is established for the licences when the flow is at, or below, 1 ML/day on a rising river and 0.5 ML/day on a falling river (measured at the flow reference point) and is now in force.

Limited volumes are available below this cease to pump threshold for **basic landholder rights** (1.8 ML/day) and for licence holders that require continued access to water for hygiene and health purposes, that is, those listed on **Schedule 6** of the Plan. At the start of the Plan there were no such licence holders identified. A standard amendment was made to all unregulated river water sharing plans allowing licence

holders who historically required water for dairy washdown, fruit washing, poultry watering and animal hygiene to extract up to 20 kilolitres per day during very low flows periods.

In the other flow classes (B, C, D and E), the TDEL will set how much water can be taken by extractive users – the rest will remain in the Creek and its associated aquifer for the environment (other than that extracted under basic landholder rights).

Managing this water source within the overall long-term average extraction limit ensures that the environmental provisions are protected from increases in water extraction. The environmental health water provisions will also protect the water source for traditional Aboriginal use and contribute to improved water quality.

Basic landholder rights

The Plan provides for domestic and stock rights and native title rights – both forms of basic landholder rights which extract water from a river or aquifer and do not need to be licensed.

At the start of the Plan, the water requirements for domestic and stock rights were estimated at 1.8 ML/day. There are currently no extractions for native title rights from this water source. However, both forms of right may increase during the Plan's ten-year term. Any such increase will be accommodated by reduced access by unregulated river and aquifer access licences.

Domestic and stock rights can be restricted during dry times to protect the environment or for reasons of public health or to protect water availability for other basic landholder rights.

Requirements for water under access licences

Other than basic landholder rights, water extraction is authorised under a water access licence. There is a range of different categories of water access licences, which include:

- domestic and stock – for those who cannot access water under basic landholder rights or they wish to use greater quantities than available under this right,
- unregulated river – this is a general category that covers purposes such as irrigation, industry, mining, recreation and general farming. Irrigation is the major use of water in the water source,
- aquifer – this is a general category also covering a range of commercial purposes, but where the works are a well or bore, and
- Aboriginal cultural – a specific sub-category of unregulated river or aquifer access licence which allows water to be taken by Aboriginal persons or communities for personal, domestic and communal purposes.

Each water access licence specifies a **share component**. The share component of specific purpose licences such as local water utility, domestic and stock, and Aboriginal cultural are expressed as a number of megalitres. The share components of general unregulated river and aquifer access licences are expressed as a number of shares.

At the start of the Plan, the requirements identified for unregulated and domestic and stock access licences from the water source totalled 7,942 ML/year and for aquifer access licences 267 ML/year (1 share at the start of the plan is considered equivalent to 1 megalitre per year). Whether these annual volumes will be available in a **water year** will be dependent on climate and creek flows.

The total share component within the water source may change during the term of the Plan as a result of the granting or cancellation of licences, or the finalisation of the volumetric quantification of groundwater licences.

Granting access licences

Applications can only be made in this water source for Aboriginal cultural access licences up to 10ML/yr per application.

Long-term average extraction limit

It is important that total annual extractions do not increase, as this would threaten the security of supply to water users and the environmental provisions of the Plan. Water extractions can increase through:

- existing licence holders using more of their share component,
- the granting of exempt licences, or
- the sale of currently unused share components.

The long-term average extraction limit will be determined and managed across the entire Goulburn Extraction Management Unit. If extractions exceed the limit, then they must be reduced until they are brought back into line with this figure. This will be carried out through reductions in the volume of water that can be taken in the subsequent year by unregulated river and aquifer access licences.

Available water determinations

Each year, an **available water determination** is made defining how much of the share component is available under each category of water access licence. Except in years of exceptional drought, domestic and stock access licences will receive 100% of the share component. The available water determination for unregulated river and aquifer access licences may be less than 1 megalitre per share if the long-term average extraction limit is being exceeded.

For 2004/2005 a special AWD of 2 megalitres per share or volume was made to accord with previous agreed rules. This, combined with the carryover rules (see next section on *Water allocation accounts*), enables licence holders to use up to twice their water allocation in a year provided that over a consecutive three year period they do not exceed the sum of their water allocations for those three years.

Water allocation accounts

A water allocation account has been established for each water access licence. Water is credited to the account when an available water determination is made and debited when water is extracted. The maximum unused water allocation that can be carried over from one water year to the next is 100% of the share component.

For example, if a licence holder has a share component of 50 shares and the available water determination is 1 megalitre per share, then 50 ML is credited to the account at the start of the water year. If only 30 ML is extracted, 20 ML can be carried over to the following water year. If the available water determination remains at 1 megalitre per share, then up to 70 ML is available for extraction in the following water year. On an annual basis, licence holders cannot extract more water than is held in their account. As explained in the next section, once daily flow shares are introduced in the water source, a daily limit in addition to the annual limit will apply.

Sharing flows on a daily basis

For water to be shared fairly amongst all water users, plus a provision made for the environmental needs, limits must be set on the volume of water that can be taken from a particular flow class on a daily basis. The total daily extraction limit (TDEL) for all water access licences (both river and aquifer) in each flow class is as follows:

- 0 ML/day for the very low flow class,
- 7 ML/day for B class,
- 13.5 ML/day for C class,
- 20 ML/day for D class, and
- 37 ML/day for E class.

The TDEL assigned to various categories of water access licence at the start of the Plan is shown in the table.

TABLE: Total Daily Extraction Limits (ML/day)

Flow Class	Domestic and stock access licence TDEL	Unregulated river and aquifer access licences TDEL	All water access licences TDEL*
Very low flows <1 ML/day (rising) < 0.5 ML/day (falling)	0	0	0
B Class 1 – 7 ML/day (rising) 0.5 – 7 ML/day (falling)	0.2	6.8	7
C Class 7 – 16 ML/day	0.2	13.3	13.5
D Class 16 - 100 ML/day	0.2	19.8	20
E Class > 100 ML/day	0.2	36.8	37

* Water for basic landholder rights has been estimated at 1.8 ML/day. This is in addition to the licensed TDELs.

When the B to E flow classes are to commence, the Department will formally notify each licence holder of their **individual daily extraction limits** (IDELs) in each flow class. This will form part of the **extraction component** on the licence.

Group management

As daily flow sharing is introduced, the plan provides for a system of group management to provide licence holders with more flexibility in managing their individual daily extraction limits. This will operate in a similar way to a rostering system. It permits an individual licence holder to exceed their individual daily extraction limit provided the group as a whole does not.

Group management will enable more flexible pumping regimes. In turn, licence holders will be required to maintain accurate records of their pumping times and rates, to enable total water extraction within the water source to be monitored.

Management of local impacts

Groundwater extraction may cause problems in a localised area even though total extraction from the groundwater source is within the extraction limit. For example, there may be changes to groundwater dependent ecosystems, water levels, water quality, or interference between users. Many of these changes may lead to permanent damage to the groundwater source if no action is taken.

Restrictions on pumping by aquifer access licences from a local area may be applied for a period of time if necessary because of declining water levels or water quality. The restrictions may limit extraction on a yearly, monthly or even weekly basis. These rules are known as **local impact management**.

Access licence dealing rules

Access licence dealings or water dealings can include the following:

- sale or transfer of the ownership of a licence (called a ‘transfer’),
- change in the location where a licence can be used,

- sale (called an ‘assignment’) of the share component or extraction component of a licence,
- subdivision or consolidation of licences,
- sale of account water (called an ‘assignment of water allocation’),
- change in the category of a licence (called a ‘conversion’),
- rental of a licence (called a ‘term transfer’),

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

The main dealings provisions in the Plan are:

- licences and water allocations can be traded within the water source and between unregulated river and aquifer licences, except if the dealing would result in the share component in zones 1 and 3 increasing by more than 10% or would cause local groundwater impacts. Note: metering is required before water allocation assignments can occur;
- licences and water allocations can be traded within the Goulburn Extraction Management Unit provided the plan for the other water source permits this, and
- an unregulated river licence can be converted to an aquifer access licence and vice versa
- an unregulated river licence can be converted to a domestic and stock licence.

Conversion factors for some dealings may apply. These are intended to protect environmental health and water availability to all licences in the water source.

Mandatory conditions

The Plan sets out a number of conditions that are applied to water access licences and **water supply work approvals**. These 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 or altered unless the Plan itself is amended.

Monitoring and reporting

The Plan includes performance indicators against which the performance of the Plan will be monitored to determine if it is meeting its objectives. The Plan will be audited every five years. The Natural Resources Commission 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 is to be established setting out the means by which the provisions of the Plan will be achieved. This Implementation Program will be reviewed each year and the results reported in the Department’s Annual Report.

Plan amendments

An important aspect of the Plan is that it provides certainty to water users in terms of their access to water. This is because the rules for the next decade are defined and documented in the Plan. However, during the term of the Plan, some amendments may be needed. The Plan allows an amendment to:

- very low flow provisions and bottom of B class flows based on field verification;
- establish pool control levels;
- the environmental health water and TDEL for a flow classes based on a study of water usage and surface water/groundwater connectivity; and
- the TDEL for unregulated river and aquifer access licences, if necessary, as a result of growth in basic landholder rights.

Glossary of terms

access licences provide the holder with a share of the available water in a water source. The access licence is separate from the approvals required for water use or for the supply works eg. pump, dam, bore.

access licence dealings refer to a range of changes to an access licence or the water held in the account for that licence. These include a change in the ownership of all or part of the licence, a change in the location from which water is extracted, movement (assignment) of water allocations between licences, or a change in the category of the licence.

available water determinations (AWDs) determine how much water a licence holder can extract in a year. An AWD adds water to the accounts of all access licences in that category. The AWD will also ensure that long-term extraction does not exceed the extraction limit.

average annual recharge is the volume of water added to the groundwater source naturally, usually by infiltration from rainfall and river flows, and assessed on a long-term average basis. This recognises that the amount of recharge to a groundwater source can vary from year to year depending on climatic conditions.

basic landholder rights cover three types of rights to extract water that do not require an access licence. The first allows rural landholders along the riverfront or overlying an aquifer to extract water for domestic household and stock watering purposes (*domestic and stock rights*). Domestic and stock rights replace riparian rights under the *Water Act 1912*. The second right allows landholders to capture a portion of the runoff from their land in farm dams (*harvestable rights*). Harvestable rights do not involve extraction directly from the river and so have not been provided for in the plan. The third right allows Aboriginal native title holders (as determined under the Commonwealth *Native Titles Act 1993*) to extract water for a range of domestic and non-commercial communal purposes (*native title rights*).

extraction component of the access licence specifies the sections of the water source from which water may be taken. It may also set the times and rates at which water can be taken, such as IDELs.

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

extraction management unit is the grouping of water sources for the purpose of managing annual average extraction.

flow classes describe the range of daily flow levels in the river and provide the framework for sharing water on a daily basis.

flow reference point is the site from which the flows are calculated to determine the flow class.

harvestable rights allow landholders to capture and use 10 per cent of the average regional rainfall runoff on their land in farm dams. Harvestable rights are intended to satisfy essential farm needs such as stock watering, and house and garden requirements, but can be used for any purpose including commercial irrigation.

individual daily extraction limit (IDEL) is the daily volume limit for a particular licence holder for each flow class. The IDEL will be specified as part of the extraction component on the access licence. It is a share of the total daily extraction limit.

local impact management is required when concentrated pumping causes the water level to drop in a particular area or causes water quality problems. The Plan sets distance limits for new bores and allows restrictions the amount of water that can be extracted within an area for a period of time.

schedule 6 identifies those licence holders that may continue to access water during periods of very low flows in order to comply with the requirements of the *Food Production (Safety) Act* or the *Prevention of Cruelty to Animals Act*. This covers fruit washing, cleaning of dairy plant and equipment for the purpose of hygiene, poultry watering and misting, and cleaning of enclosures used for intensive animal production for the purposes of hygiene.

share component of the access licence is similar to the entitlement volume on previous water licences. The amount of water an access licence holder is allocated in any year as a result of an available water determination is based on their share component. Other rules, such as carryover, are also based on the share component.

total daily extraction limit (TDEL) is the limit on the daily volume of water that access licence holders in a category can take from a particular flow class.

water supply works approval permits water supply works (pumps, dams, bores) to be built and operated at specified locations.

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