Water sharing plans
Inland NSW unregulated and alluvial water sources

Overview
The Office of Water manages the policy and regulatory frameworks for the State’s surface water and groundwater resources to provide a secure and sustainable water supply for all users. The Office of Water also supports water utilities in the provision of water and sewerage services throughout New South Wales.

Water sharing plans – Inland NSW unregulated and alluvial water sources – Overview
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Introduction

Unregulated rivers are rivers typically dependent on rainfall and natural flows rather than water released from dams. Groundwater is the water beneath the earth’s surface that filters through and is held in rock, gravel or sand. Groundwater can be found in all areas of NSW, although its quantity and quality vary widely. Alluvial groundwater has been included in water sharing plans for unregulated rivers across the state, so that the connectivity between these resources can be managed effectively.

This overview document provides a general explanation to assist you in understanding the key provisions of a water sharing plan covering inland unregulated and alluvial sources. The overview document should be read in conjunction with other key information including:

- the plan
- the background document to the plan
- the individual rules summary sheet for each water source

This information and other information on the planning process are located on the NSW Office of Water’s website www.water.nsw.gov.au under Water Management > Water sharing plans > Plans commenced.

The provisions in the plan provide water to support the ecological processes and environmental needs of high priority groundwater dependent ecosystems (GDEs) and rivers, and direct how the water available for extraction is to be shared. The plan also sets management rules for water access licences, water allocation accounts, dealings in licences and water allocations, water supply works approvals and the extraction of water.

Once the plan commences, the licensing provisions of the Water Management Act 2000 (WMA 2000) will also come into effect in the plan area. This means that existing Water Act 1912 (WA 1912) licences will be converted to WMA 2000 water access licences, and water supply works and use approvals. The water access licences are therefore separated from land and as a result trading is enhanced.

The WMA 2000 and the plan also introduce some new terminology and different management arrangements. These new terms are highlighted in the text and where they are not defined in the WMA 2000, they are explained in the glossary at the end of this overview document.

Water sharing planning

Water sharing plans are one of the final components of the NSW Government’s comprehensive overhaul of the water management strategies in the state.

Water sharing plans are developed under the WMA 2000, which requires the plans to:

- share water between all water users and the environment
- improve the health of our rivers
- provide security of access for water users
- meet the social and economic needs of regional communities
- facilitate water trading.
Overview of the planning process

Initial development of the draft plans is undertaken by interagency regional panels (IRPs) across the state, comprising local representatives from the NSW Office of Water, the NSW Office of Environment and Heritage, and catchment management authorities, and agriculture, fisheries and aquaculture specialists from the NSW Department of Primary Industries.

The draft rules are developed by considering environmental values and hydrologic stress for each water source and a standard set of water sharing rules extended across water sources with similar classifications. Individual water sources that pose particular environmental or socio-economic issues are also considered, so that water sharing rules can be tailored to their specific requirements.

Consultation on the draft rules was generally undertaken using a two stage process including targeted consultation with key stakeholders and public exhibition of the draft plan. In some areas, targeted consultation is not undertaken as the proposed rules are not considered to be significantly different to current rules of operation or are unlikely to have a significant impact on users. Where targeted consultation is undertaken, the comments received are considered by the IRP and may lead to the amendment of the draft rules, where appropriate, prior to the public exhibition of the draft plan. In some instances an immediate change may not be made. However, a Minister’s note may be added to the draft plan to draw attention to a particular issue on which further comment is sought during the public exhibition period.

As part of public exhibition, the draft plans are formally exhibited for a minimum period of 40 days, during which public information sessions are generally held within the plan area to provide information on the background to the development of the draft rules, the draft rules proposed, and how to make a submission. Feedback and submissions received during this period are considered by the IRP prior to the final plan being submitted to the Minister for approval to be made and commence. A list of the changes that were made to the plan during consultation is typically included in the background document to the plan.

NSW water sharing plans and the Commonwealth Basin Plan – understanding the relationship

Water sharing plans, created by the NSW Government, and the Murray-Darling Basin Plan, being developed by the Commonwealth Government, are required under separate legislation. For some areas within the Murray-Darling Basin the NSW Government is creating water sharing plans at the same time as the Commonwealth Government’s Murray-Darling Basin Authority is developing the Basin Plan.

Although the Basin Plan may prescribe Sustainable Diversion Limits that differ from the long-term average annual extraction limits in a macro water sharing plan, it is important that NSW continues to progress macro water sharing plans, for the following reasons:

- Water Management Act 2000 (WMA 2000) provisions for developing water sharing plans and licensing water extractions operate independently of the Basin Plan. It is important that the NSW Office of Water continues to implement the Act’s provisions.

- The NSW Government has committed under the National Water Initiative and the NSW Government State Plan to complete water sharing plans within specified timeframes.

- When a water sharing plan commences, the licensing and approval provisions of the WMA 2000 replace those of the Water Act 1912. Under the WMA 2000, water licences are generally perpetual, unlike the licences they replace, and they are separated from land, creating new opportunities and flexibility for businesses wishing to trade water. There are several existing water sharing plans already in place and, to ensure that all licence holders
are on an equal footing when the Basin Plan commences, it is important to complete the remaining macro water sharing plans in the basin.

- Macro water sharing plans that take effect before the Basin Plan commences will be considered an interim water resource plan under the *Commonwealth Water Act 2007*. The Basin Plan may set sustainable diversion limits that are lower than the long-term average annual extraction limits set in macro water sharing plans. Commencing NSW water sharing plans before the Basin Plan is in place provides businesses with a longer period to plan for reduced water availability should this happen. Creating NSW water sharing plans will also establish a statutory plan limit or benchmark against which the impacts of the Commonwealth Basin Plan sustainable diversion limits may be assessed.

- The Office of Water will continue to develop water sharing plans according to the provisions of the WMA 2000 after the Basin Plan commences. Water sharing plans made after the Basin Plan takes effect will need to be accredited by the Commonwealth Minister in line with Basin Plan requirements. However, it will remain the Office of Water’s responsibility to develop the plans under NSW legislation.
Water sharing plans for unregulated and alluvial water sources

Plan area
Water sharing plans for unregulated rivers (being those typically dependent on rainfall and natural river flows rather than water released from dams) and associated alluvial groundwater systems have been completed using a ‘macro’ or broader scale river basin approach. Each macro plan covers a large river basin rather than a single water source. These macro plans generally apply to catchments where there is less intensive water use compared with the areas that were covered by plans in 2004.

Basis for water sharing
The plan provides for the sharing of water between the environment, town water supplies, basic landholder rights and commercial uses of water. The volume of water available to meet all competing environmental and extractive needs varies on a yearly and daily basis, depending on the weather, river flows and aquifer characteristics.

An individual licence holder’s annual access to water is governed by their entitlement and climatic availability. However, the combined licence holders’ annual access to water is managed in the draft plan through long-term average annual extraction limits (LTAAELs).

The LTAAEL applies differently for unregulated surface water and alluvial groundwater sources. For unregulated surface water the LTAAEL applies across a number of water sources grouped together, either across the entire catchment, or part of the catchment (e.g. all water sources above a regulated dam). This group of water sources is referred to in the plan as the extraction management unit (EMU). For alluvial groundwater sources the LTAAEL is typically set for each water source.

In addition to the long-term management rules, the unregulated water sources are also managed on a day-to-day basis in the plan through the definition of daily access rules that govern when licence holders are permitted to extract water. Generally, as a minimum, licence holders pumping from an unregulated water source cannot pump when there is no visible flow at their pump site or below the full capacity of a natural pool. Depending on the water source assessments, some of the water sources are also divided into one or more flow classes.

The flow classes describe the range of flows that occur in the water source and relate to the flow at a specific point in the river (referred to as the flow reference point in the plan). The delineation of flow classes varies between water sources.

Those alluvial groundwater sources that are highly connected to perennial unregulated rivers are also managed on a day to day basis in the plan through the definition of access rules that are linked to relevant unregulated river flows.

Environmental water
The principles of the WMA 2000 require that water sharing must protect the water source and its dependent ecosystems, such as wetlands and floodplains. The plans generally do this in a number of ways.

First, by establishing the LTAAEL all other water is set aside for environmental needs, thereby protecting this share of water for environmental purposes.
In addition to the annual limits, access rules (known commonly as the cease to pump (CtP) rules) provide protection for fish and other aquatic species during dry times. The CtP applies to the majority of unregulated river access licences – those which cover irrigation, farming, industrial and recreational uses. Aquifer access licences that extract groundwater that is highly connected to the unregulated surface water may also have a CtP rule applied. Limited access is available below the CtP threshold for town water supplies, some domestic and stock water and for licence holders that require continued access to water for hygiene and health purposes. These licences are listed in a schedule 1 of the plan.

Rules for granting and amending water supply works approvals are established for groundwater sources to provide protection for environmental assets. This provides protection for base flows and key assets such as groundwater dependent ecosystems (GDEs). These rules stipulate buffer distances from which new bores can be placed from specific features such as GDEs, neighbouring bores and contaminated sites, as well as rules for existing bores.

The plans also provide for licensed water to be committed for adaptive environmental water purposes. Over time, licences may be acquired or committed to this purposes, or possibly created through water saving projects.

Requirements for water

Basic landholder rights

Under the WMA 2000, extraction of water for basic landholder rights (BLR) does not require a licence, although in the case of accessing groundwater under BLR the bore must still be approved by the NSW Office of Water. BLR includes water for domestic and stock purposes extracted from a surface water source fronting a landholder’s property or from any aquifer underlying the land, and for native title rights.

The principles of the WMA 2000 also require that water sharing must protect BLR. The plans do this by including an estimate of the water requirements for BLR at the start of the plan. In many plans there is currently no extraction for native title rights. However, these rights may be activated during the term of the plan. Furthermore the CtP rules apply to licensed water users but not for those exercising their BLR. This in effect affords these BLR users some additional protection.

Domestic and stock rights can be restricted by the Minister to protect the environment or public health, or to preserve existing BLR. These restrictions are outside the framework of the plan. The Office of Water is developing a regulation that will limit extractions under domestic and stock rights to a reasonable volume, where they are metered, and more clearly define what is considered to be reasonable purposes, which is important where BLR use is not metered.

Extraction under access licences

Except for basic landholder rights, all other water extraction either requires an authorisation under a water access licence or some form of exemption. The WMA 2000 establishes categories and sub-categories of access licences. Examples include:

- local water utility – a category of access licence for town water purposes
- domestic and stock – a category access licence for landholders who cannot access water under basic landholder rights (i.e. their property does not directly front a river, lake or estuary, or have an underlying aquifer)

1 Holders of licences identified in a schedule to the plan may continue to access water during periods of very low flows for fruit washing, cleaning of dairy plant and equipment for the purposes of hygiene, poultry watering and misting or cleaning of enclosures used for intensive animal production for the purpose of hygiene.
• unregulated river – a category of access licence that covers purposes such as irrigation, industry, mining, recreation and general farming; in most water sources, irrigation accounts for the majority of this type of licence
• unregulated river special additional (high flow) – a category of access licence with high flow access conditions, originally attached to an unregulated river access licence
• aquifer – a category of access licence that covers purposes such as irrigation, industry, mining, recreation and general farming; these apply to the alluvial groundwater sources covered by the plans
• supplementary water – a category of access licence that may be issued during the life of a plan for certain alluvial groundwater sources
• Aboriginal cultural – a specific sub-category of access licence that allows water to be taken by Aboriginal persons or communities for personal, domestic and communal purposes (generally up to 10 megalitres per year per licence)
• Aboriginal community development – a specific sub-category of access licence that allows water up to specified limits to be taken by Aboriginal persons or communities for commercial purposes.

The total entitlement or share component (see WMA 2000, Section 56), for each category of access licence that applies at the start of the plan, has been estimated and included in the plan. The share components of specific purpose licences such as local water utility, domestic and stock and Aboriginal cultural purposes are expressed as a number of megalitres per year. The share components of regulated river, unregulated river and aquifer access licences, which are issued in perpetuity, are expressed as a number of unit shares in the available water.

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

Long-term average annual extraction limit

The plans describe a LTAAEL for each water source or EMU as part of the basis for water sharing.

For surface water in inland NSW the LTAAEL is based on the Murray-Darling Basin Ministerial Council (MDBMC) Cap, which was introduced in 1995 to halt growth in extractions across the basin. For unregulated rivers, the LTAAEL is equal to the state’s definition of MDBMC Cap levels of extraction, i.e. the estimated annual extraction of water averaged over the period July 1993 to June 1999.

For most alluvial groundwater sources in inland NSW the LTAAEL is equal to the average annual extractions in this water source over a specified period. The estimation of these extractions may be based on one of the following:
  • metered usage data
  • a percentage activation based on metered extractions in a similar water source
  • survey data.

To protect the water for the environment and the supply to existing users, it is important to control any growth in water use over time that is above that allowed for in the plan, i.e. growth above the LTAAEL. It is possible that future extraction may exceed the extraction limit established by the plan either through the issue of new shares in the form of specific purpose access licences, increased basic landholder rights activation, or through the activation of inactive share components of existing licences.
Where management systems are in place, the NSW Office of Water will monitor annual extractions over a rolling average period. In the event that extractions are assessed as exceeding the LTAAEL over this period, then they will be reduced until they are brought back to the LTAAEL. This will be done by reducing the maximum available water determinations for either the unregulated river or aquifer access licences.

**Available water determinations**

**Available water determinations** (AWDs) are used to credit water to accounts. They define what proportion of the share component will be available for extraction under each category of licence.

AWDs for specific purpose access licences, such as domestic and stock and local water utility access licences, will generally be 100 per cent so that their entire share component will be available.

Generally, the AWD for unregulated river and aquifer access licences will be 1 ML per unit share unless a growth-in-use response is required.

For unregulated river access licences in the first year of the plan there will be an AWD of 200 per cent of share component (where the share component is expressed in ML) or 2 ML per unit share (where share component is expressed in unit shares). This will allow accounting rules to operate from year one of the plan allowing for variability in unregulated surface water flows (see water allocation account rules below).

To acknowledge the contribution of streamflow to groundwater pumped from alluvium highly connected to regulated rivers, AWDs for aquifer access licences in these groundwater sources will be made in two parts. The first part will be equal to the AWD for regulated river (high security) or regulated river (general security) access licences, reflecting the availability of water in the regulated river. The second part of the AWD will be based solely on groundwater and will therefore not change with the resource assessment.

A maximum AWD for unregulated river and aquifer access licences of less than 1 ML per unit share may also be made if average extraction in previous years exceeds the LTAAEL. This will mean that if there is significant growth in water use, the lower security access licences in the water source that is deemed to have grown may receive fewer megalitres in their water account than they have shares.

**Water allocation accounts**

A water allocation account will be established for each water access licence. Water is credited to the account when an AWD is made, and debited when water is extracted. A licence holder’s account is not permitted to go into debit.

The accounts of unregulated river access licences will operate under three year account management rules. Available water determinations combined with carryover will enable 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. The maximum amount of unused water allocation that can be carried over from one water year to the next in unregulated river access licence accounts will be 100 per cent of the share component (where this is expressed in ML) or 1 ML per unit share (where share component is expressed in unit shares).

In most alluvial groundwater sources, accounts are managed on an annual basis with the maximum use limited to the allocations (AWDs) accrued each water year. Some carryover from one year to the next may be permitted, based on the storage capacity of the aquifer. In some alluvial groundwater sources defined as highly connected to unregulated water sources, the accounting rules will be equivalent to those for unregulated water source.
Sharing flows on a daily basis

A **total daily extraction limit** (TDEL) can be set which establishes the maximum amount of water that can be taken from the flow class to which the TDEL applies. This limits consumptive extractions to a share of the available water within that flow class and can be utilised where there are particularly important environmental values that depend specifically on the protection of a share of flows within the flow class.

The plan also has the capability of specifying **individual daily extraction limits** (IDELs), which in effect disaggregate the TDEL to individual shares of that TDEL. These may be specified for each licence holder in each flow class and may be utilised where there is also high competition between consumptive water users.

Daily limits that set the maximum amount of water that can be taken from a particular flow class (total daily extraction limit or TDEL) or by each licence holder from a particular flow class (individual daily extraction limits or IDEL) may be established within the life of the plan in some of the unregulated water sources.

Granting access licences

Other than through the purchase of a water access licence or share component in the water market, applications for the granting of additional water access licences with additional entitlement will only be considered for specific purpose access licences as provided for under the Water Management (General) Regulation 2004. This regulation prescribes a number of different types of specific purposes access licences for which application may be made, including such purposes as local water utility or town water supply, domestic purposes, and Aboriginal cultural purposes.

Granting water supply work approvals

Rules controlling the granting or the nomination of water supply works, particularly in respect to groundwater bores, are included in the plans. These are designed to minimise impacts on existing authorised extraction and on sensitive areas.

Access licence dealing rules

**Access licence dealings** or water trading can include the following:

- sale or transfer of the ownership of an access licence (called a ‘transfer’)
- change in the location that a water access licence can extract water from a water source
- sale (called an ‘assignment’) of the share component or extraction component (see WMA 2000, Section 56) of an access licence
- sub-division 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 NSW Office of Water’s website [www.water.nsw.gov.au](http://www.water.nsw.gov.au).

To protect the environmental health of the water source and to prevent over-extraction of any one water source, the plans specify various dealing rules. For water sources that have high environmental value or hydrologic stress, the default rule is to not allow any additional trades into that water source.
Mandatory conditions

The plans set 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 established by the plan. They are imposed on the licences at the commencement of the plan, are required to be complied with, and cannot be removed or altered unless the plan is amended.

Some licences under the WA 1912 included specific cease to pump (CtP) conditions. In water sources where these existing CtP conditions are more stringent than the recommended access rules as detailed in the plan, the NSW Office of Water has reviewed these conditions and determined which conditions will be carried across and apply to the individual instead of the specified plan flow classes. These are detailed within a schedule to the plan.

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 implementation of the plan will be audited every five years. The Natural Resources Commission of NSW, an independent authority established by the NSW Government, will review the plan prior to any decision to extend its term or to make a new plan. This review will be done between years five and 10 of the plan.

In addition, an implementation program may be established which sets out the means by which the objectives of the plan will be achieved. This implementation program is to be reviewed each year and the results reported in the NSW Office of Water’s Annual Report.

Plan amendments

An important aspect of a water sharing plan is that it provides security and certainty to licence holders in terms of perpetual and compensable water access licences, and clearly defines their access to water over the next 10 years. However, during the term of the plan, some amendments may be needed as a result of further studies undertaken or additional aspects implemented. These possible amendments are listed in the plan.

A plan may also be amended if it is deemed to be in the public interest to do so or as a result of a decision by the NSW Land and Environment Court.
Glossary of terms

Many of the terms in this document are defined in the *Water Management Act 2000* and are therefore not redefined here. However, there are some terms that are not and have therefore been defined below to assist with understanding the plan.

**Account water:** The balance in an access licence water allocation account at a particular time. An access licence water allocation account records water allocations accrued under the licence as well as water allocations taken, assigned (traded) or recredited. The operation of the account is also governed by carryover and account management rules as established in a water sharing plan.

**Alluvial, alluvium:** Sediment deposited by a stream of running water, in particular along river beds or flood plains.

**Extraction of water:** Removal of water from a river for off-stream storage or consumptive use.

**Extraction management unit (EMU):** A group of water sources; defined for the purpose of managing long-term average annual extractions.

**Flow classes:** The range of daily flow rates in a river which provides the framework for sharing water on a daily basis.

**Flow gauging station:** A device used to measure the height of water levels in a river, from which the flow in the river can be calculated.

**Flow reference point (FRP):** The site from which the flow data is calculated to determine the rates associated with a flow class and then to implement the daily access rules during the life of the plan.

**Full capacity:** The volume of water that is impounded in the pool, lagoon or lake when the level of water in the pool, lagoon or lake is at the high water mark.

**Groundwater:** The water beneath the earth’s surface that has filtered down to the zone where the earth or rocks are fully saturated.

**Groundwater dependent ecosystems (GDEs):** Ecosystems that rely on groundwater for their species composition and their natural ecological processes.

**Individual daily extraction limit (IDEL):** The daily volume limit that may apply 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 establishes a share of the TDEL for that flow class.

**Long-term average annual extraction limit (LTAAEL):** The target for total extractions (under all water access licences plus an estimate of basic landholder rights within an EMU or water source) which is used to assess whether growth in extractions has occurred.

**Macro water sharing plans:** Water sharing plans that apply to a number of water sources across catchments or different types of aquifers. The macro planning process is designed to develop broader-scale water sharing plans covering most of the remaining water sources in NSW.

**Management zone (MZ):** An area within a water source used for defining the location and applicability of water sharing rules, but secondary to the water source. A management zone is more likely to be designated where local dealing restrictions are in place or where ‘cease to pump’ (CtP) rules for works approvals apply.

**Pools:** Lentic water bodies (standing water), including anything falling within the definition of a “lake” found in the Dictionary of the *Water Management Act 2000*, except for tidal pools and estuaries.

**Total daily extraction limit (TDEL):** The total limit on the daily volume of water that access licence holders in a particular category can take from a flow class. It is the sum of all the IDELs in that flow class.

**Visible flow:** The continuous downstream movement of water that is perceptible to the eye.