

Replacement of the NSW Great Artesian Basin Water Sharing Plan—proposed changes

Water sharing plans are the primary legal framework for managing water access and sharing in NSW. The plans are valid for 10 years from their starting date.

Near the end of the 10-year term, the independent Natural Resources Commission formally reviews the plan to identify the necessary changes to deliver better outcomes for all water users, including the environment.

Under the *Water Management Act 2000* the minister may, on recommendation by the Natural Resources Commission, extend a water sharing plan for another 10 years or replace the plan¹.

In 2018, the Natural Resources Commission completed its review of the current plan and recommended its replacement. This replacement is due by 1 July 2020. A copy of the commission's report is available at www.nrc.nsw.gov.au/publications

This fact sheet summarises proposed changes to the water sharing plan arrangements for the NSW Great Artesian Basin. In summary, changes are proposed to the:

- objectives, strategies, and performance indicators
- definition of planned environmental water
- estimated requirements for water
- definition of limits to the availability of water for extraction in the area
- distance rules for groundwater works
- access licence dealing rules
- mandatory conditions
- amendment provisions

The proposed changes to the plan range from purely administrative to more substantial. In general, the changes aim to modernise and simplify the water sharing plan to make it easier to read, while maintaining its legal accuracy. The NSW Department of Planning, Industry and Environment has also made changes to improve consistency in our management of groundwater resources across the State, and to ensure provisions are clear and can be implemented.

Scope of the water sharing plan

The department has drafted a new water sharing plan called the *Water Sharing Plan for the NSW Great Artesian Basin Groundwater Sources 2020*. This plan will replace the *Water Sharing Plan for the NSW Great Artesian Basin Groundwater Sources 2008*.

Objectives, strategies and performance indicators

We have revised the objectives, strategies and performance indicators of the water sharing plan. The proposed new objectives, strategies and performance indicators deal with similar matters to the previous ones, but we have changed them to make a stronger logical connection between the objectives and the strategies and rules for achieving these. The

¹ Extension refers to the extension of a plan for a further 10 years without change. Replacement is where changes to the existing plan are proposed.

environmental, economic, social and Aboriginal cultural objectives of the plan are also now more clearly distinguish.

Estimated requirements for water

We have updated the total volumes or unit shares specified in the share components of all access licences to reflect the most current information.

Basic landholder rights—domestic and stock

We have reviewed the method for estimating the basic landholder rights (domestic and stock rights) to inform the figures in the replacement plan.

The revised method is a combination of the department's current basic landholder rights estimation method and that used in the Queensland portion of the Great Artesian Basin. The revised method also discounts the take of water from overlying groundwater sources and watercourses in the estimation of basic landholder rights.

We estimated the stock requirement by applying stocking rate and stock water consumption rate over the grazing land identified in the NSW 2013 land use data.

We estimated the domestic requirement for rural properties only, based on the assumption that urban and peri-urban properties (those with less than five hectares of land) have town water supply access. The estimates are based on the occupancy rate (of five) of a property and an occupant consumption rate of 375 litres a day for each occupant. The maximum garden watering is assigned 10 litres a week for a square metre of garden, capped to maximum 2,000 m² size of garden for each property.

For more information on the basic landholder rights review, refer to www.industry.nsw.gov.au/gab-groundwater-water-sources-components-for-consultation

Revised estimates for the Eastern and Southern Groundwater Sources

We have updated the estimates in the Great Artesian Basin Water Sharing Plan for recharge, planned environmental water and the long-term average annual extraction limit for the Eastern Recharge and Southern Recharge Groundwater Sources to incorporate new knowledge and updated information, ensuring that the best available methodology is being used.

- We reviewed recharge and identified recommended recharge rates and volumes. The volume of recharge estimated for these groundwater sources is an increase from the recharge estimates used in the 2008 water sharing plan. A copy of the background report is on the department's website
- The percentage of recharge reserved for throughflow to the neighbouring artesian groundwater sources was retained at 60%.
- The percentage of net recharge committed as environmental water was retained at 30%.
- The percentage of net recharge committed to the long-term average annual extraction limit was retained at 70%.

The Eastern Recharge and Southern Recharge Groundwater Sources are largely non-artesian (that is, water levels in bores are lower than the ground surface). In these water sources, a percentage of groundwater recharge (infiltration of rain and river water to the water table) is reserved for the environment and the remainder is available for consumptive use (that is, the long-term average annual extraction limit). We have changed the way in which planned environmental water is specified in the water sharing plan to make the definition more accurate and remove reference to recharge.

For more information, see the fact sheet *Eastern Recharge and Southern Recharge Groundwater Sources: Long-term average annual extraction limits and planned environmental water* available here: www.industry.nsw.gov.au/gab-groundwater-water-sources-components-for-consultation

Revised estimates for the Surat, Warrego and Central Groundwater Sources

We have updated the estimates in the Great Artesian Basin Water Sharing Plan for planned environmental water and the long-term average annual extraction limits for the Surat, Warrego and Central Groundwater Sources to incorporate new knowledge and updated information. However, we have maintained the intent of the 2008 extraction limits and planned environmental water commitments.

The updated long-term average annual extraction limits for these groundwater sources are:

- a numeric volume (requirements for basic landholder rights, plus 2008 licensed entitlement, plus 30% of water savings made since 1999)
- plus the volume of water that is used to convey water through inefficient water distribution systems (such as open drains) to deliver domestic and stock rights,
- plus 30% of any future water savings made as part of cap and pipe projects from the start of the water sharing plan.

Planned environmental water provisions for the Surat, Warrego and Central Groundwater Sources will continue to ensure that 70% of water savings made since 1999 under cap and pipe programs continue to be preserved as environmental water, as well as ensuring that 70% of future water savings are preserved.

For more information, see the fact sheet *Surat, Warrego, Central Groundwater Sources: Long-term average annual extraction limits and planned environmental water* available here: www.industry.nsw.gov.au/gab-groundwater-water-sources-components-for-consultation

Standardising distance rules

The rules for assessing applications for new and amended water supply works (bores) has been standardised. The **proposed changes to rules** are summarised below. All other rules in the water sharing plan remain the same.

Rules to minimise interference between users

New or amended water supply work approvals will not be granted:

- within 200 m of a water supply work (if take is less than or equal to 20ML/yr)
- within 200 m of a bore used solely for basic landholder rights (Eastern and Southern Groundwater Sources)
- within 500 m of a bore used solely for basic landholder rights (Surat, Warrego and Central Groundwater Sources)
- within 1,000 m of a local water utility bore
- within 400 m of a government monitoring bore.

Rules for water supply works located near contamination sources

New or amended water supply work approvals will not be granted:

- within 250 m from the edge of a contamination plume
- between 250–500 m of the edge of a contamination plume where drawdown will occur within 250 m of the edge of the contamination plume.

We propose introducing an additional rule. This is to reduce the risk to public health and safety from contaminated groundwater from on-site sewage disposal systems in the Eastern Recharge and South Recharge Groundwater sources, as follows:

- A water supply work approval located within 250 m of an on-site sewage disposal system may only be granted or amended if the water supply work is:
 - constructed with cement grout between the bore casing and the borehole annulus to a minimum depth of 20 m from the ground surface, and
 - located at sufficient distance from the on-site sewage disposal system to prevent septic contamination of the aquifer.

Rules for water supply works located near groundwater-dependent ecosystems

New or amended water supply works (bores) will be prohibited within 40 m of the top of the high bank of a river in all groundwater sources.

In the Eastern Recharge and Southern Recharge groundwater sources, where there are other potential high-priority groundwater-dependent ecosystems (mapped groundwater-dependent vegetation ecosystems), we propose to prohibit new or amended water supply works within the following distances of those ecosystems:

- 100 m for basic landholder rights works (bores)
- 200 m for all other bores

Setback distance rules from high-priority groundwater-dependent ecosystems (springs) for works taking water solely under basic landholder rights in the Eastern and Southern Groundwater Sources have been simplified to 1,000m.

All other setback distance rules from high-priority groundwater-dependent ecosystems (springs) have not changed.

Rules for water supply works located near groundwater-dependent, culturally significant sites

The following minimum distance rules for the construction of new or amended water supply works from groundwater-dependent culturally significant sites are proposed:

Eastern Recharge and Southern Recharge Groundwater Sources as follows:

- 100 m for basic landholder rights bores
- 200 m for all other bores

Surat, Warrego and Central Groundwater Sources as follows:

- 50 km for all bores.

Additions to groundwater-dependent ecosystems schedules

Recent work by the department has identified additional potential high-priority groundwater-dependent ecosystems. We propose to add the extent of these groundwater-dependent ecosystems to the High-priority Groundwater-dependent Ecosystem Map for the Great Artesian Basin Water Sharing Plan.

The department has also undertaken work to verify the springs identified in the current water sharing plan. This work has informed the springs listed in a schedule of the plan. A report on the site selection methodology for spring surveys is available from

www.industry.nsw.gov.au/gab-groundwater-water-sources-components-for-consultation

More detailed information on this proposal is in the fact sheet *Groundwater-dependent ecosystems: Identifying and protecting groundwater-dependent ecosystems in the Great Artesian Basin*, available from www.industry.nsw.gov.au/gab-groundwater-water-sources-components-for-consultation

Removal of ‘local impact management’ and take ‘within restricted distances’ rules

Rules for granting new water supply works or amending existing water supply works will remain in the water sharing plan, as outlined above. However, we propose to remove the provisions relating to restricting take from existing water supply works, specifically the rules for the use of water supply works located within restricted distances for the Surat, Warrego, Central, Eastern Recharge and Southern Recharge Groundwater Sources.

Contemporary advice is that the powers to restrict groundwater take from existing water supply works lie firmly within the *Water Management Act 2000* (the Act), and that their duplication and re-interpretation in water sharing plans may cause inconsistencies between the Act and the plan. This means that the Act will continue to provide the framework for groundwater take from existing water supply works.

The powers in the Act enable the minister, at any time, to specify a limit on the volume or rate of extraction from a water supply work to minimise effects on:

- other users
- groundwater-dependent ecosystems
- groundwater-dependent, culturally significant areas
- public health and safety.

The minister may also place conditions on, or refuse an application for a dealing, to effect these outcomes.

For transparency, the draft plan includes notes explaining these powers.

More details on the process for assessing groundwater applications for a new or amended water supply work approval or dealing, is provided in the fact sheet *Assessing groundwater applications*, available from www.industry.nsw.gov.au/__data/assets/pdf_file/0008/175931/Assessing-groundwater-applications-fact-sheet.pdf

Access licence dealing rules

We propose to permit permanent trades (section 71Q assignment of rights under the Act) for the Surat, Central and Warrego Groundwater Sources as long as the trade does not cause the sum of the share components of all access licences and the volume of water taken under basic landholder rights to exceed:

- (a) the volume of water taken under basic landholder rights at plan commencement, plus
- (b) the sum of the share components of all access licences as at 2008, plus
- (c) 30% of savings made since 1999 until the commencement of this Plan, plus
- (d) 30% of future water savings.

In the plan, the sum of (a), (b) and (c) is reflected as a number.

This is to be consistent with current rules that permit trades in the Surat, Warrego and Central Groundwater Sources for a change of water source (section 71R) as well as temporary trades (section 71T).

Mandatory conditions

Two new mandatory conditions are proposed to reduce the volume of water flowing from artesian, free-flowing bores in the Great Artesian Basin, and are as follows:

- For new bores—a mandatory condition is proposed requiring new bores to be fitted with headworks to enable the control of water flow
- For new and existing bores (where applicable)—a mandatory condition is proposed for all bores (new or existing) that have headworks, requiring the headworks to be maintained and operational.

Amendment provisions

The water sharing plan includes amendment provisions that allow for:

- extraction limits to be amended to give effect to savings made under cap and pipe projects
- the staged reduction of carryover provisions (to not less than 1ML per unit share) and the reduction of the maximum water account debit in a water year for aquifer access licences
- the inclusion, modification or removal of provisions for the granting of domestic and stock (conveyance) access licences.

More information

The draft NSW Great Artesian Basin Water Sharing Plan 2020 and other fact sheets are available from www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans/water-sharing-plans-on-public-exhibition/gab