

Proposed changes to groundwater sharing plans

The NSW water sharing plans are the primary legal framework for managing water access and sharing in the Murray-Darling Basin. Chapter 10 of the *Basin Plan 2012* requires that water resource plans are prepared to meet requirements set out by Commonwealth legislation. NSW is meeting these requirements by replacing, remaking or amending existing water sharing plans to meet the accreditation requirements of Chapter 10 of the *Basin Plan 2012*.

This factsheet is a summary of proposed changes to the groundwater sharing plan for the alluvial groundwater resources in the Namoi Valley. In summary, changes are proposed to the:

- Scope
- 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
- Measurement of compliance with limits to the availability of water
- Available water determinations for Upper Namoi Zone 1
- Management zones in Upper Namoi Zone 11
- Distance rules for groundwater works
- Ability to adjust the limits to the availability of water in line with s 7.25 of the Basin Plan.

The proposed changes to the plan range from purely administrative to more substantial. In general, the changes aim to modernise and simplify the watering sharing plan to make it easier to read and put in place, while maintaining its legal accuracy. In addition, we have made changes to eliminate inconsistencies, inequities, and unintended implementation issues.

Scope of the water sharing plan

A new water sharing plan called the '*Water Sharing Plan for the Namoi Alluvial Groundwater Sources 2019*' has been drafted. It is proposed that this plan will replace:

- the *Water Sharing Plan for the Upper and Lower Namoi Groundwater Sources 2003* in relation to the Lower Namoi, and Upper Namoi (Zones 1-12) groundwater sources,
- the *Namoi Unregulated and Alluvial Water Sources 2012* in relation to Manilla Alluvial, Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial groundwater sources, and
- the *Water Sharing Plan for the Peel Valley Regulated, Unregulated, Alluvium and Fractured Rock Water Sources 2010* in relation to the Peel Alluvium groundwater source.

This process will align the water sharing plan area with the Namoi Alluvium Water Resource Plan Area, as defined in the *Basin Plan 2012*, and deals with all substantial alluvial water resources in the Namoi catchment in a single water sharing plan.

Objectives, strategies and performance indicators

The objectives, strategies and performance indicators have been revised. The proposed new objectives, strategies and performance indicators of the WSP deal with similar matters to the previous ones, but have been changed to:

- link the objectives, strategies and performance indicators more strongly

- distinguish between the environmental, economic, social and Aboriginal cultural objectives more clearly.

Definition of planned environmental water

We propose to change the way planned environmental water is specified in the water sharing plan. We will define it more accurately, including removing the reference to recharge. This change will not alter the actual volume of planned environmental water or the timing of its availability to the environment.

More information on this proposal is provided in the fact sheet *Specifying planned environmental water in groundwater plans*, available from www.industry.nsw.gov.au/water.

Estimated requirements for water

We have updated the estimated water requirements of basic landholder rights. We have also updated the total volumes or unit shares specified in the share components of all access licences to reflect the current information.

Aligning long-term average annual extraction limits to Basin Plan sustainable diversion limits

The *Basin Plan 2012* and more contemporary water sharing plans in NSW include a numerical estimate of basic landholder rights requirements within the long-term limits to the availability of groundwater. This approach will be adopted for the Upper and Lower Namoi groundwater sources in the new plan, with the estimate of requirements for basic landholder rights calculated at 2012. This approach is currently taken in the Peel Alluvium, Manilla Alluvial and the Upper Namoi Tributary Alluvium groundwater sources (Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial).

The long-term average annual extraction limits for the Lower Namoi, Peel Alluvium and Manilla Alluvial groundwater sources will align with the sustainable diversion limits established in the *Basin Plan 2012* for these areas (referred to as sustainable diversion limit resource units in the *Basin Plan 2012*). The sustainable diversion limit for the Upper Namoi Alluvium sustainable diversion limit resource unit is the sum of the long-term average annual extraction limits for the Upper Namoi Zones 1 to 12 groundwater sources. Likewise the sustainable diversion limit for the Upper Namoi Tributary Alluvium sustainable diversion limit resource unit is the sum of the long-term average annual extraction limits for the Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial groundwater sources.

In addition, the plan currently includes references to supplementary water access licences in the Upper and Lower Namoi that were phased out in 2015/16. These will be removed.

Compliance with long-term average annual extraction limits

We propose to change the period for assessing compliance with the long-term average annual extraction limit, so that the average annual extraction limit for the last five years will be compared with the long term limit, rather than the last three years, as previously. This is a change for the Upper and Lower Namoi groundwater sources.

This change will make the assessment process consistent across the groundwater sources, and will provide some flexibility to accommodate climatic variability while still protecting environmental values.

No change is proposed to the triggers for requiring action to ensure compliance with the long-term average annual extraction limit. These are:

- 5% for the Upper and Lower Namoi groundwater sources,
- 10% for the Manilla Alluvial, Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial groundwater sources, and
- 15% for the Peel Alluvium groundwater source.

As previously, if extraction exceeds the triggers, the Minister can limit the available water determinations to lower priority access licences¹ to achieve compliance in the following year(s).

We have also proposed an additional, alternative means to achieve compliance. With this mechanism, the Minister may also limit the water allocation that can be taken, assigned under section 71T of the *Water Management Act 2000*, or otherwise debited or withdrawn, from a water allocation account, to achieve compliance. This method may reduce the need for more severe limits on available water determinations.

If compliance action is required, licence holders will be consulted on the most appropriate mechanism to achieve compliance with the long-term average annual extraction limit.

Compliance with Basin Plan sustainable diversion limits

The existing water sharing plan that specifies the process to assess compliance with the long-term average annual extraction limits. Additional provisions will be included that directly adopt the *Basin Plan 2012* provisions for assessing compliance with the Basin Plan long term average sustainable diversion limits.

The *Basin Plan 2012* requires an annual assessment of extractions against 'annual permitted take'. Annual permitted take will be defined as for each groundwater source, as follows.

In the Manilla alluvial groundwater source, the annual permitted take will be equivalent to the sustainable diversion limit, which in this case is equal to the long-term average annual extraction limits.

In the Upper Namoi Tributary Alluvium groundwater sources the annual permitted take will be equivalent to the sustainable diversion limit, which is the sum of the long-term average annual extraction limits for the Quipolly Alluvial, Currabubula Alluvial and Quirindi Alluvial groundwater sources.

The annual permitted take for the Lower Namoi, Upper Namoi and Peel Alluvium groundwater sources is the sustainable diversion limit, modified each year based on rainfall at Narrabri, Gunnedah, and Tamworth respectively. The amount of actual rainfall is compared to average annual rainfall at each of those locations, and used to vary the annual permitted take by up to twenty percent of the sustainable diversion limit. In general, extraction exceeds the sustainable diversion limit in dry years and is below it in wet ones, and the variation aims to manage this effect.

The annual permitted take is determined at the end of each water year for each groundwater source according to the methods above. It is an annual expression of the longer term sustainable diversion limit for the purpose of assessing compliance, and doesn't directly determine the water a licence holder can take in any water year.

In order to assess compliance with the longer term sustainable diversion limit, annual permitted take will be compared with the total annual actual take from a resource unit. Under the *Basin Plan 2012*, there is non-compliance with a sustainable diversion limit when the cumulative actual take from a resource unit exceeds the cumulative annual permitted take by 20% or more of the sustainable diversion limit.

If compliance action is required, the Minister may limit available water determinations and/or the water that can be taken from accounts in subsequent years, as outlined in the section above.

More information on these issues is in these fact sheets available from www.industry.nsw.gov.au/water:

- *Compliance with the sustainable diversion limit for groundwater*
- *Available water determinations in groundwater sources*
- *Namoi Alluvium – relationships between the water resource plan and water sharing plans.*

¹ aquifer access licences or aquifer access (general security) aquifer access licences

Available water determinations for Upper Namoi Zone 1

Under the Achieving Sustainable Groundwater Entitlements program, Upper Namoi Zone 1 total entitlements of aquifer access licences were reduced by 90%, because it had a local water utility access licence of 1,716ML/yr. This volume was very large for a small groundwater source.

Since the original entitlement reduction, the local water utility has forfeited 500ML of their entitlement to redistribute to aquifer access licence holders. Each year, the Department has been giving these users an Available Water Determination of 2.3ML/ unit share, which equates to the 500ML forfeited by the local water utility.

To ensure access to this water by Upper Namoi Zone 1 users, the Department proposes to formalise the current arrangement in the new water sharing plan, specifically to including provisions that:

- allow for a maximum available water determination in Zone 1 of 2.3 ML/unit share of entitlement,
- allow carryover of 4.6 ML/unit share of entitlement to ensure equity between all upper Namoi zone users, and
- set a maximum water account debit of 4.6 ML/ unit share of entitlement.

Further discussion is proposed with stakeholders on this approach during the public exhibition phase of the draft water resource plan and water sharing plan.

Management zones in Upper Namoi Zone 11

The groundwater within the Upper Namoi Zone 11 groundwater source is highly connected to surface water, particularly upstream of Elfin Crossing. Independent research has shown that upstream of Elfin Crossing, Maules Creek gains water from the underlying groundwater while downstream of Elfin Crossing, Maules Creek loses water to the underlying groundwater.

There has been a history of concern over groundwater extraction at and above Elfin Crossing on Maules Creek, including the impacts of groundwater pumping on access to domestic and stock basic landholder rights and on the pools adjacent to Elfin Crossing. Historically, to manage the groundwater level decline, the Department has placed temporary water restrictions on groundwater users with aquifer access licences. There have been numerous representations from community members to reintroduce these restrictions in the current drought.

To manage the situation over the long term, the Department proposes to create two management zones in the Upper Namoi Zone 11 groundwater source – upstream and downstream of Elfin Crossing, and to include in this Water Sharing Plan specific access rules in the upstream zone, linked to access conditions for unregulated river licences in Maules Creek.

The detail of the rules will be the subject of discussions with stakeholders during the public exhibition phase of the draft water resource plan and water sharing plan.

Peel Alluvium Cockburn Management Zone access rules

Access rules in the Cockburn area have recognised surface/groundwater connectivity and the environmental values of the Cockburn River. To date stakeholders have expressed concerns regarding the appropriateness of the current rules. Further studies have been undertaken to inform proposed rules for the replacement plan.

The details of the rules will be the subject of discussions with stakeholders during the public exhibition phase of the draft water resource plan and water sharing plan. The intention is to align these rules with the revised access rules in the surface water sharing plan for this area.

Standardising distance rules

We propose to standardise the rules for assessing applications for new or amended water supply works (bores). The proposed changes to rules are summarised below.

Rules to minimise interference between users

For all groundwater sources, new bores used solely for basic landholder rights must be 100 metres from a government observation bores, unless the landholder has ministerial consent.

We also propose the following minimum distance requirements for the construction of new water supply works, other than those used solely for basic landholder rights.

For the Peel Alluvium, Manilla Alluvial and the Upper Namoi Tributary Alluvium groundwater sources:

- 200 metres from an existing supply work used solely for basic landholder rights
- 100 metres from a boundary with a neighbour unless written consent is provided from the neighbour
- 500 metres from a water utility water supply works unless written consent is provided by the utility licence holder
- 100 metres from a government monitoring bore unless there is ministerial consent
- 200 metres from all other water supply works

For the Lower Namoi groundwater source and the Upper Namoi groundwater sources:

- 200 metres from an existing supply work used solely for basic landholder rights
- 200 metres from a boundary with a neighbour unless written consent is provided from the neighbour
- 500 metres from a water utility water supply works unless written consent is provided by the utility licence holder
- 400 metres from a government monitoring bore unless there is ministerial consent
- 400 metres from a bore extracting from the Great Artesian basin
- 400 metres from all other water supply works

Rules for water supply works located near contamination sources

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

- within 500 metres of a contamination source listed in Schedule 1 of the water sharing plan
- within 250 metres of the edge of a contamination plume
- between 250 and 500 metres of the edge of a contamination plume where drawdown will occur within 250 metres of the edge of a contamination plume.

We propose to introduce an additional rule for all groundwater sources, to reduce the risk to public health and safety from contaminated groundwater from on-site sewage disposal systems, as follows:

- A water supply work approval located within 250 metres 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 annulus² to a minimum depth of 20 metres 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

² the space between the bore casing and the wall of the borehole

Unless the Minister is satisfied that allowing the work to be located at a lesser distance will have minimal impact at most on a groundwater-dependent ecosystem, new or amended water supply works approvals will not be granted within:

- 40 metres of the top of the high bank of a river for all groundwater works in the Manilla Alluvial, Peel Alluvium and Upper Namoi Tributary Alluvium groundwater sources
- 100 metres of the top of the high bank of a river if the work will take water solely for basic landholder rights from the Lower Namoi and Upper Namoi groundwater sources
- 200 metres of the top of the high bank of a river for all other groundwater works in the Lower Namoi and Upper Namoi groundwater sources
- 100 metres of a groundwater-dependent ecosystem in all groundwater sources if the work will take water for solely basic landholder rights
- 200 metres of a groundwater-dependent ecosystem for all other groundwater works in all groundwater sources

Additions to groundwater-dependent ecosystems schedules

A recently completed program by the NSW Department of Industry has identified potential additional, high-priority, groundwater-dependent ecosystems. The mapped extent of these groundwater-dependent ecosystems will be included as a water sharing plan schedule. The setback distance rules for new water supply works outlined above will apply to these groundwater-dependent ecosystems.

More detailed information on this proposal is provided in the fact sheet *Namoi Alluvium – managing groundwater-dependent ecosystems*, available from www.industry.nsw.gov.au/water

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 (as amended) in the water sharing plan, as outlined above. However, we propose to remove the provisions about restricting take from existing water supply works. Specifically, we intend to remove the rules for

- managing local impacts for the Upper and Lower Namoi Groundwater Sources and
- the use of water supply works located within restricted distances for the Peel Alluvium, Manilla Alluvial and Upper Namoi Tributary Alluvium.

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 impacts on other users, on groundwater-dependent ecosystems, or groundwater-dependent culturally significant areas; or for public health and safety reasons. The Minister may also condition 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/water

Adjustments to groundwater sustainable diversion limits

Section 7.25 of *Basin Plan 2012* allows for the MDBA to propose 'an adjustment of the sustainable diversion limit for a groundwater sustainable diversion limit resource unit if better information becomes available about the groundwater resources of the unit and the factors relevant to setting the sustainable diversion limit.

To allow for this, the new Namoi Alluvial water sharing plan will contain a provision that allows for a s.7.25 adjustment, and in particular for Part 6 of the plan to be amended for sustainable diversion limits and long-term average annual extraction limits to be modified.

More information

The draft Namoi Alluvium Water Resource Plan and other fact sheets are available from www.industry.nsw.gov.au/water

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