

## Groundwater-dependent ecosystems

*The Basin Plan 2012 requires the identification, consideration and active management of priority environmental assets and ecosystem functions dependent on groundwater.*

### Identifying and protecting groundwater-dependent ecosystems

Groundwater-dependent ecosystems are those that require access to groundwater to meet all or some of the water requirements necessary to maintain their plant and animal communities and ecological processes.

Water sharing plans for groundwater identify high-priority, groundwater-dependent ecosystems in a schedule and include protection rules, such as restrictions on the construction of groundwater bores within specified distances from the groundwater-dependent ecosystems.

The NSW Department of Industry recently completed a program to identify and prioritise groundwater-dependent ecosystems in NSW.

The *High probability GDE method report* details the method used and is available from: [industry.nsw.gov.au/water/science/groundwater/ecosystems](http://industry.nsw.gov.au/water/science/groundwater/ecosystems).

### Management of groundwater-dependent ecosystems

Proposed changes in the draft *Water Sharing Plan for the Gwydir Alluvial Groundwater Sources 2019* to manage groundwater-dependent ecosystems include:

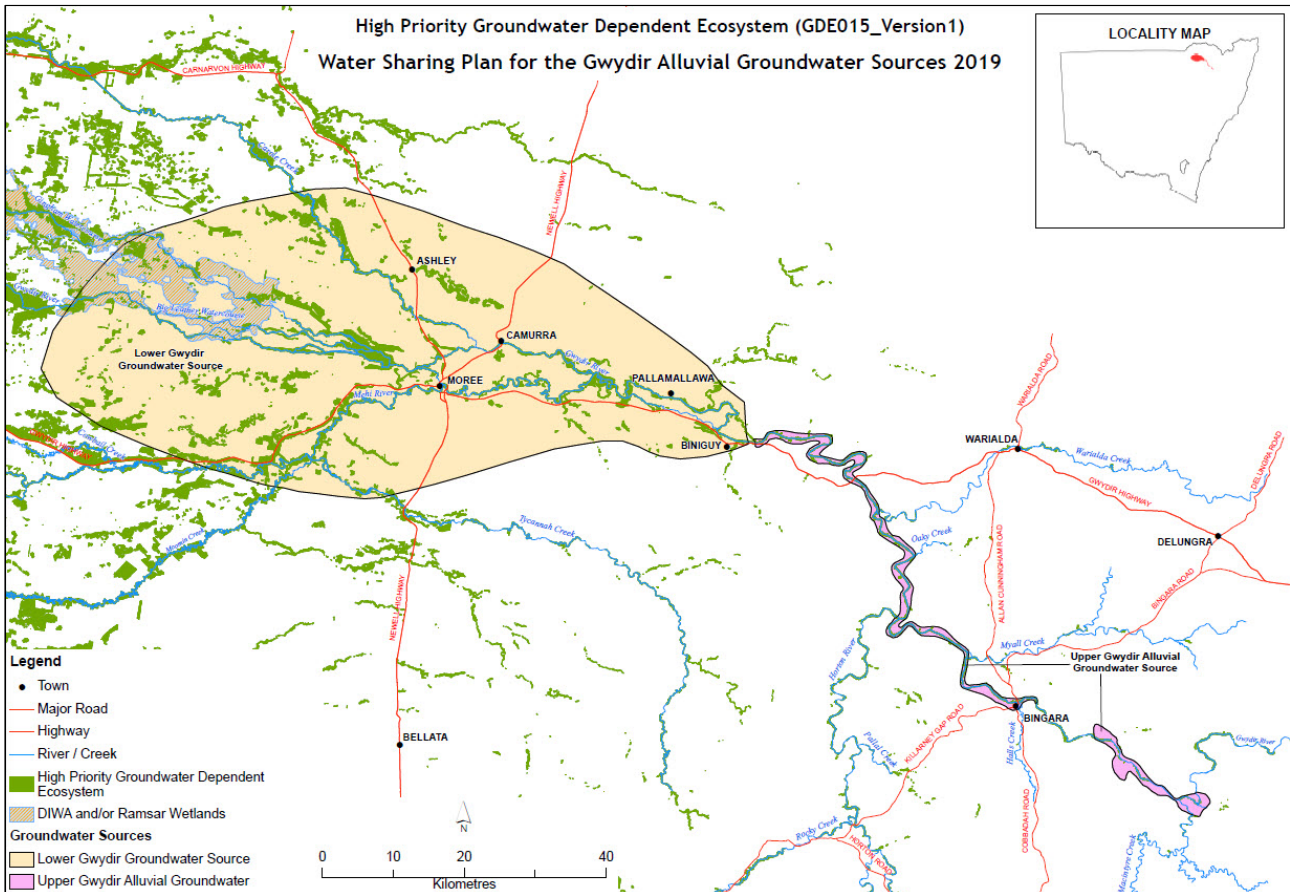
- adding the recently identified, high-priority, groundwater-dependent ecosystems into the water sharing plan schedule (shown in Figure 1)
- applying default setback distance rules for new water supply works (including bores) as follows:
  - 40 metres from the top of the high bank of a river in the Upper Gwydir alluvial groundwater source
  - 100 metres from the top of the high bank of a river for works for basic landholder rights and 200 metres from the top of the high bank of a river for works relating to access licences in the Lower Gwydir groundwater source
  - 100 metres from all other groundwater-dependent ecosystems if the work will take water for basic landholder rights only
  - 200 metres from all other groundwater-dependent ecosystems for all other groundwater works, unless the Minister for Regional Water is satisfied that allowing the work to be located at a lesser distance will have no more than minimal impact on the groundwater-dependent ecosystem.

The setback distance rules will not apply to a water supply work for the purpose of monitoring, environmental remediation activities or emergency services, or to replacement groundwater works. A replacement groundwater work is defined in the draft *Water Sharing Plan for the Gwydir Alluvial Groundwater Sources 2019*.

The department will make an initial assessment of applications for new water supply work approvals located within the default setback distances. There may be the opportunity to mitigate potential impacts on high-priority, groundwater-dependent ecosystems through conditions on the work approval such as grout sealing the work to a specified depth, setting extraction limits or changing the proposed location.

Where the initial assessment doesn't identify adequate mitigation measures, the applicant may be required to submit further information, such as a hydrogeological study, to support the application. The department will consider this additional information before the application for approval is determined.

Where a water supply work is currently located within the default setback distances, the work can continue to be used. If it becomes evident that there is a decline in health of a nearby groundwater-dependent ecosystem, investigations into the cause and possible remedial actions will be considered in consultation with the water supply work approval holder.



**Figure 1. High-priority, groundwater-dependent ecosystems of the Gwydir alluvium**

## More information

See the following fact sheets on the NSW Department of Industry's website, [industry.nsw.gov.au/water-resource-plan-consultation](http://industry.nsw.gov.au/water-resource-plan-consultation):

- *Gwydir alluvium—Proposed changes to groundwater water sharing plans*
- *Groundwater available water determinations*
- *Sustainable diversion limit compliance*
- *Water resource plans in NSW*

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