Security classification: Public | March 2017

Potential groundwater dependent ecosystem aquifer mapping background

Version 1.5

Groundwater is an important resource in Australia that plays an important ecological role in directly and indirectly sustaining a range of aquatic and terrestrial ecosystems. A basic requirement for managing these ecosystems dependent on groundwater, or groundwater dependent ecosystems (GDEs), and our groundwater resources is to know where and how groundwater moves through the landscape.

Potential GDE aquifer mapping identifies the extent and key characteristics of aquifers potentially supporting surface expression and terrestrial GDEs in the landscape. There may be other aquifers at depth that are not captured in this mapping (e.g. confined aquifers) but may support GDEs. The potential aquifers captured in this mapping may also be subterranean GDEs.

Potential groundwater dependent ecosystem aquifer mapping

The potential groundwater dependent ecosystem aquifer mapping method

During the implementation of the Queensland Groundwater Dependent Ecosystem Mapping Method (Department of Science, Information Technology, and Innovation 2015) valuable local expert knowledge is captured on the extent and properties of potential aquifers supporting GDEs. The development of the potential GDE aquifer mapping is intended to complement existing GDE mapping and provide valuable additional information about the extent and properties of aquifers potentially supporting GDEs. Further information on the mapping method is contained in 'Potential Groundwater Dependent Ecosystem Aquifer Mapping Method: A method for providing baseline mapping of potential aquifers supporting groundwater dependent ecosystems in Queensland' (Department of Science, Information Technology and Innovation 2015).

Potential groundwater dependent ecosystem aquifer mapping products

The potential GDE aquifer mapping consists of one spatial data set:

- Potential groundwater dependent ecosystem aquifer (area features)

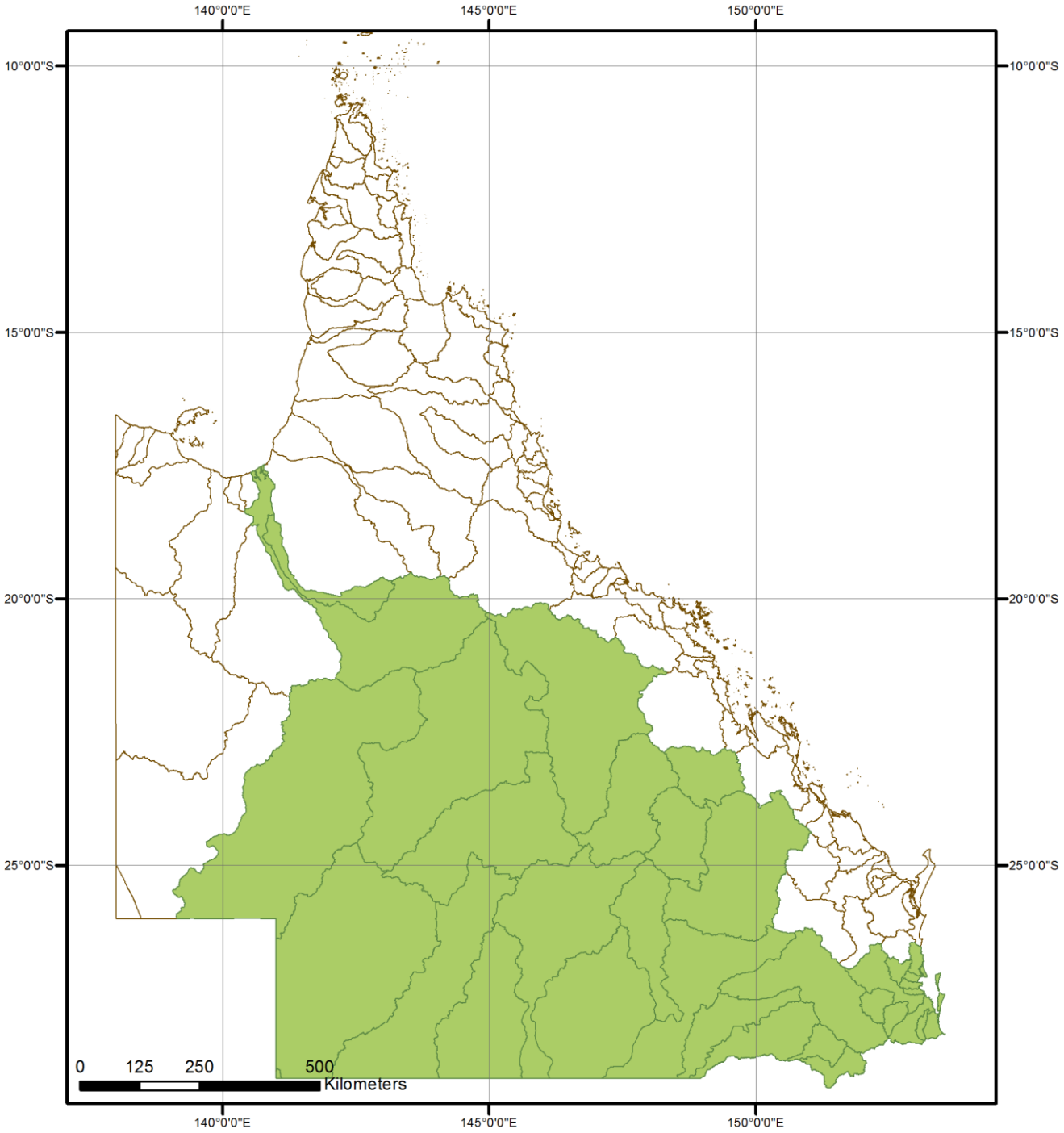
The potential GDE aquifer mapping is supported by a suite of complementary products including mapping rule-sets (description of why an area was identified as continuing a shallow water table aquifer) and pictorial conceptual models (graphical representations of the key drivers, processes and interrelationships of groundwater in a landscape).

Potential groundwater dependent ecosystem aquifer mapping data history

- Version 1.5 – released in March 2017
  - Mapping from version 1.4 with updates to include additional mapping for the eastern Murray-Darling Basin.
- Version 1.4 – released in December 2015
  - Mapping from version 1.0 with updates to include additional mapping for Comet, Dawson and Mackenzie catchments.

- Version 1.0 – released in July 2015
  - Potential groundwater dependent ecosystem aquifer (area features) for South East Queensland and Lake Eyre Basin (including surrounding catchments). This dataset was formerly called ‘Queensland Shallowest Watertable Aquifer Mapping’.

Current extent of potential groundwater dependent ecosystem aquifer mapping



Citation

Queensland Government (2017) *Potential groundwater dependent ecosystem aquifer mapping background: version 1.5*, Queensland Government, Brisbane.