# Aquatic ecosystems toolkit



Based on work undertaken by Ms Jennifer Hale and Dr Shane Brooks for the Aquatic Ecosystems Task Group

2012

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Other sections of this document are available from <www.environment.gov.au/water/publications/environmental/ ecosystems/ae-toolkit-cs-1.html>

### Published by

Department of Sustainability, Environment, Water, Population and Communities

### Authors/endorsement

This case study is based on trials of the draft Guidelines for Identifying High Ecological Value Aquatic Ecosystems, and the draft Aquatic Ecosystem Delineation and Description Guidelines. The final reports from these trials are as follows:

Hale, J. (ed.) (2010). Lake Eyre Basin High Conservation Aquatic Ecosystem Pilot Project. Report prepared for the Aquatic Ecosystems Task Group and the Department of Environment, Water, Heritage and the Arts. Jennifer Hale, Kinglake.

Hale, J., and Brooks, S. (2011). *Trialling the guidelines for the delineation of High Ecological Value Aquatic Ecosystems (HEVAE) in the Lake Eyre Basin (LEB)*. Report prepared for the Aquatic Ecosystems Task Group and the Department of Sustainability, Environment, Water, Population and Communities. Jennifer Hale, Kinglake.

These reports are available on request from the Australian Government Department of Sustainability, Environment, Water, Population and Communities.

Endorsed by the Standing Council on Environment and Water, 2012.

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These trials were undertaken during the time when guidance on the identification, delineation and description of aquatic ecosystems was an area of active policy development. The work informing the contents of this publication was carried out under budgetary and time restraints, resulting in limited ability to incorporate all available datasets and information into the process.

### Citation

Aquatic Ecosystems Task Group (2012). Aquatic Ecosystems Toolkit. *Case Study 1: Lake Eyre Basin*. Department of Sustainability, Environment, Water Population and Communities, Canberra.

The publication can be accessed at <http://www.environment.gov.au/water>

**Front page:** Lake Goyder, part of a network of lakes and swamps that fill from Cooper Creek in north-east South Australia (Peter Canty)

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# **Abbreviations**

AETG	Aquatic Ecosystems Task Group
ANAE	Australian National Aquatic Ecosystems (Classification Scheme)
AquaBAMM	Aquatic Biodiversity Assessment Mapping Methodology
AWRC	Australian Water Resources Council
CAMBA	China–Australia Migratory Bird Agreement
CDI	Catchment Disturbance Index
CFEV	Conservation of Freshwater Ecosystem Values Framework
DEM	Digital Elevation Model
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EFZ	Ecological Focal Zone
EPBC	Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)
ERP	Expert Reference Panel
GAB	Great Artesian Basin
Geofabric	Australian Hydrological Geospatial Fabric
HCVAE	High Conservation Value Aquatic Ecosystems
HEVAE	High Ecological Value Aquatic Ecosystems
IBRA	Interim Biogeographic Regionalisation of Australia
IUCN	International Union of Conservation of Nature
JAMBA	Japan–Australia Migratory Bird Agreement
LEB	Lake Eyre Basin
NCB	National Catchment Boundaries
NRETAS	Department of Natural Resources, Environment, The Arts and Sport (Northern Territory)
RDI	River Disturbance Index
ROKAMBA	Republic of Korea–Australia Migratory Bird Agreement
SWMA	(Australian) Surface Water Management Areas
TWG	Technical Working Group



### Introduction

Draft components of the national Aquatic Ecosystems Toolkit, developed by the Aquatic Ecosystems Task Group (AETG), were trialled in the Lake Eyre Basin. Trial application of module 3 was undertaken by a multijurisdictional team, led by Jennifer Hale, and module 4 by Jennifer Hale and Shane Brooks.

The base information developed and collated was done so within time and resource constraints and with regard to the objectives of the High Ecological Value Aquatic Ecosystems (HEVAE) trial and the HEVAE 'Framework' as it was at that time. Therefore, while the ancillary outcomes of this project such as the aquatic ecosystem mapping may be fit for the purpose of this trial, they should not be considered final products. Note that at the time the trial was undertaken:

The terminology 'High Conservation Value Aquatic Ecosystems' (HCVAE) was still in use. However, to reflect the change in name to 'High Ecological Value Aquatic Ecosystems', the term HEVAE has been used in this case study, consistent with the other toolkit documents.

Module 3: Guidelines for Identifying High Ecological Value Aquatic Ecosystems (HEVAE) was known as the HEVAE Framework.

There were six HEVAE criteria; 'evolutionary history' has since been incorporated into 'distinctiveness'.



Lake Goyder, part of a network of lakes and swamps that fill from Cooper Creek in north-east South Australia (Peter Canty)