Draft Native Vegetation Regulation 2004 Environmental Outcomes Assessment Methodology

NSW Native Vegetation Reforms

Protecting and investing in healthy and productive landscapes for the people of New South Wales

NSW Government

Draft Native Vegetation Regulation 2004: Environmental Outcomes Assessment Methodology

NSW Department of Infrastructure, Planning and Natural Resources
23-33 Bridge Street Sydney NSW Australia
www.dipnr.nsw.gov.au
DIPNR 04_230
ISBN 0-7347-5561-9

Contents

1. Introduction

In December 2003 the Government undertook a major overhaul of natural resource management institutions in NSW by passing the *Natural Resources Commission Act, 2003 Catchment Management Authorities Act 2003* and the *Native Vegetation Act 2003*.

These new reforms were built on the Wentworth Groups report to Premier Carr of February 2003. This report, titled "*A New Model for Landscape Conservation in New South Wales*" contained five interdependent components:

1. strengthening and simplifying native vegetation regulations, ending the broadscale clearing of remnant vegetation and protected regrowth;
2. setting environmental standards and clarifying responsibilities for native vegetation management which will, over time, create healthy rivers and catchments;
3. using property management plans to provide investment security, management flexibility and financial support for farmers;
4. providing significant level of public funding to farmers to help meet new environmental standards and support on-ground conservation; and
5. restructuring institutions by improving scientific input into policy setting, improving information systems, and regionalising administration.

The Native Vegetation Reform Implementation Group was established to advise the Premier on how to implement the Wentworth Group's reforms. This group comprised senior representatives from farmer groups, environment groups, scientists and members of NSW public service agencies. The Native Vegetation Reform Implementation Group Report identified that:

> *"New South Wales needs a sound approach to the management of our native vegetation that:*
>
> - *is built on a shared commitment to develop the world's leading agricultural production systems that utilise maximum water efficiency and sustainable farming practices;*
> - *is capable of sustaining regional development with secure access to natural resources;*
> - *protects the environment by restoring and maintaining the quality of our water, soil and biodiversity; and*
> - *is based on mutual trust between farmers, environmentalists, governments, and the wider community."*

In December 2003 the *Natural Resources Commission Act 2003, Catchment Management Authorities Act 2003* and the *Native Vegetation Act 2003* were passed to deliver this framework.

The *Natural Resources Commission Act 2003* created the Natural Resources Commission. One of the primary functions of the Commission is to set State–wide standards and targets for natural resource management. The Commission is required to have regard to, among other things, the principles of ecologically sustainable

development, the social and economic implications of its recommendations and advice, and regional variation in the environment.

The *Catchment Management Authorities Act 2003* creates the Catchment Management Authorities (CMAs). The Authorities have both an operational role and a planning role. Operationally the CMAs are responsible for granting property vegetation plans under the *Native Vegetation Act 2003* and delivering incentives to landholders. CMAs are also responsible for preparing catchment action plans. The catchment action plans are the link between the State-wide standards and targets and on ground actions at the regional level.

An objective of the *Native Vegetation Act 2003* is to end broadscale clearing except where the clearing will improve or maintain environmental outcomes. This Environmental Outcomes Assessment Methodology sets out the circumstances in which broadscale clearing is to be regarded as improving or maintaining environmental outcomes. It will continue to be refined to ensure that it helps deliver the standards and targets set by the Commission and the catchment action plans created by the CMAs.

Notes in this document are explanatory notes and do not form part of this document for the purposes of clause 18 of the Native Vegetation Regulation 2004.

Note: For further information please see the following:

Wentworth Group of Concerned Scientists, 2003 *A New Model for Landscape Conservation in New South Wales.* NSW Government
www.wwf.org.au/News_and_information/Publications/PDF/Report/new_model_report_to_carr.pdf

Native Vegetation Reform Implementation Group, 2003 *Final Report.* Department of Infrastructure, Planning and Natural Resources
www.dipnr.nsw.gov.au/nvrig/pdf/sinclairreport.pdf

Department of Infrastructure, Planning and Natural Resources (DIPNR), 2003 *A New Approach to Natural Resource Management.*
www.dipnr.nsw.gov.au/nvrig/pdf/finalnvrig.pdf

2. Assessment of broadscale clearing proposals

2.1 Overview

The assessment process for determining whether proposed broadscale clearing will improve or maintain environmental outcomes is dependent on the type of proposed clearing.

Broadscale clearing must be assessed in accordance with Parts 2 to 6.

The overall impacts of proposed broadscale clearing are to be determined by separately assessing the impacts of the proposal on relevant environmental values. The following environmental values are assessed:

- water quality (Part 3);
- salinity (Part 4);
- biodiversity (Part 5); and
- land degradation (soil) (Part 6).

2.2 Improve or maintain test

Proposed broadscale clearing assessed under this Part is to be regarded as improving or maintaining environmental outcomes if either:

1. **In relation to development applications**, the impacts of the clearing will improve or maintain environmental outcomes for each *relevant environmental value*; or
2. **In relation to a draft Property Vegetation Plan (PVP)**, the impacts of the proposed clearing and the benefits from any offset will improve or maintain environmental outcomes for each *relevant environmental value*.

2.3 Offsets

Offsets may only be proposed in a PVP.

Where management actions that have environmental benefits (referred to as offsets) are proposed in a PVP the benefits of the proposed action are to be determined by separately assessing the benefits of the offset in relation to each of the environmental values listed above.

In addition to any specific requirements for offsets set out in Parts 3 to 6, the benefits of a proposed offset may only be taken into account when assessing whether proposed clearing will improve or maintain environmental outcomes if:

(a) the benefits of the offset persist for at least the duration of the negative impact of the proposed clearing, and
(b) the offset is additional to actions or works carried out using public funds or to fulfil regulatory obligations.

Note:

1. The principles for the use of offsets are:

A. the benefits of the offset persist for at least the duration of the negative impact of the proposed clearing; and

B. the benefits of the offset occur in the same area as the impacts of the proposed clearing; and

C. the offset vegetation for biodiversity is either of equal or greater regional conservation significance as the site proposed for clearing; and

D. management actions are likely to be deliverable and enforceable; and

E. permanent conservation measures are given greater value than other management actions; and

F. the benefits of the offset are assessed using the same methodologies used to assess the impacts of the proposed clearing; and

G. the offset is additional to actions or works carried out using public funds or to fulfil regulatory obligations; and

H. only benefits from the management action or permanent conservation action may comprise the offset.

2. Offsets (that are not related to how the proposed clearing is carried out) are not available as part of development applications as there is no way of ensuring that these actions are implemented by subsequent landholders.

3. Biodiversity outcomes will not be tradeable. Trading between the impacts and benefits on water quality, land degradation (soil) and salinity will be possible when an appropriate methodology has been approved by the Minister on the advice of the NRC.

3 Water Quality Assessment

Note: Riparian buffers are being used as a surrogate for water quality impacts. Riparian buffer distances have been proposed by the inter-agency working group that developed draft water quality standards and targets for the Natural Resources Commission. These are supported by an extensive literature review.

Riparian (or riverside) vegetation is used as a surrogate for water quality impacts.

Riparian vegetation provides multiple benefits for water quality, land degradation (soil), salinity and terrestrial and aquatic biodiversity. A recent report published by the Cotton Research and Development Corporation (2003), describes the value of riparian vegetation to the health of rivers and landscapes.

"Riparian land is important because it is usually the most fertile and productive part of the landscape, in terms of both agriculture and natural ecosystems. It often has better quality soils than surrounding hill-slopes and, because of its lower position in the landscape, often retains moisture over a longer period.

"Riparian land often supports a greater diversity of plants and animals than non-riparian land. This is a result of its wide range of habitats and food types, its closeness to water, its microclimate and its ability to provide refuge. Many native plants and animals are found only, or mainly, in riparian lands, and this makes these areas essential to many animals for all or part of their lifecycle.

"Riparian land also provides a refuge for native plants and animals in times of drought and fire, as well as providing corridors for wildlife in highly-cleared landscapes.

"Careful management of riparian land is vital for the conservation of Australia's unique biodiversity."

3.1. The 'improve or maintain' test for water quality

3.1.1 Clearing that does not improve or maintain environmental outcomes

Subject to Part 3, below, the following clearing does not improve or maintain environmental outcomes *for water quality* and cannot be offset:

- clearing native vegetation within 20 m of, and within, a stream listed in Appendix A;
- clearing native vegetation within the riparian buffer distance around important wetlands or minor wetlands.

3.1.2 Clearing that may improve or maintain environmental outcomes for water quality with appropriate offsets

Subject to Parts 1 and 3, it is deemed that clearing native vegetation within the riparian buffer distance will not improve or maintain environmental outcomes for water quality without offsets.

The offset:

- must be located within the riparian buffer distance that applies to the clearing, and
- must provide commensurate vegetation cover (to minimise soil erosion and filter sediment);
- need not be on the same stream as the stream adjacent to which the clearing is proposed.

Offsets for water quality are calculated using the process described for biodiversity in Part 5. Proposed offsets may need to be assessed under Parts 4 and 6 to determine whether the water quality offset has any negative impacts on salinity or land degradation.

3.1.3 Clearing that does improve or maintain environmental outcomes for water quality

The following clearing is deemed to improve or maintain environmental outcomes *for water quality*:

- clearing native vegetation outside the riparian buffer distances for streams and wetlands or
- clearing native vegetation within the default riparian buffer distances for streams and wetlands if it comprises thinning of native vegetation to benchmark conditions for biodiversity.

Table 3.1: Definition of riparian buffer distances

Location	**Size of stream/wetland**			
	Minor stream	**Minor creeks, flood runners & lagoons**	**Minor rivers & minor wetlands**	**Major rivers & important wetlands**
Coast & tablelands	10m	20m	30m	40m
Western slopes & plains	20m	40m	60m	100m
Estuarine areas	50m from the astronomical high tide mark (where no obvious bank).			

3.2 Definitions

Flood runner means a small distributary or anabranch, which flows only during periods of high flow in the stream it branches from.

Important wetland means a wetland that is listed in Appendix B or is a SEPP 14 Wetland.

Lagoon means a wetland that is marked on a 1:25,000 (or next best available scale) topographic map but is not listed in Appendix B, is not a SEPP 14 Wetland and is not mapped in Kingsford et al (2003).

Major river means any part of a stream that is listed as a "major river" in Appendix A which is:

a) downstream of the most upstream tributary listed in Appendix A; or
b) downstream of another stream that is listed as a "major river" in Appendix A

Minor creek or flood runner means any part of a stream that is:

a) not listed in Appendix A and is at least 2nd order in the Strahler system (based on a 1:25,000 or next best available scale topographic map); or
b) a listed tributary or effluent of a "major river" in Appendix A, and is 1st or 2nd order in the Strahler system (based on a 1:25,000 or next best available scale topographic map); or
c) listed as a "major river" in Appendix A, and is 1st or 2nd order in the Strahler system (based on a 1:25,000 or next best available scale topographic map).

Minor river means any part of a stream that is:

a) listed as a tributary or effluent (anabranch, distributary or floodrunner) in Appendix A, and is at least 3rd order in the Strahler system (based on a 1:25,000 or next best available scale topographic map); or
b) listed as a "major river" in Appendix A, and is:
   (i) above the most upstream tributary listed in Appendix A; and
   (ii) is at least 3rd order in the Strahler system (based on a 1:25,000 or next best available scale topographic map).

Minor stream means any part of a stream:

a) that is not listed in Appendix A and is 1st order in the Strahler system (based on a 1:25,000 or next best available scale topographic map); or
b) for which there is a visible channel or path where water flows intermittently or permanently, that may be vegetated and which may or may not have an eroded channel.

Minor wetland means a wetland that is mapped in Kingsford et al (2003) but is not listed in Appendix B and is not a SEPP 14 Wetland.

Stream means any river, creek, or natural watercourse, whether artificially improved or not, in which water usually flows, either continuously or intermittently, in a defined bed or channel.

Note:

1. The classification of major and minor rivers in Appendix A is based on the publication "*Restrictions on the removal of trees on NSW watercourses*", stream ordering and visual inspection. All streams listed in the booklet, whether listed as "major rivers" or not, have been provided with the same protection zone (within and within 20m of their banks) since 1964. Minor amendments have been made to the list in the booklet to make it suitable for current needs and the amended listing has been reorganised into one table for each CMA, and a separate table of "major rivers" (see Appendix A). The amendments preserve the original protection afforded to listed streams.

2.	The Commonwealth Department of Environment and Heritage has listed 'nationally important wetlands', a subset of which is a list of Nationally Important Wetlands in NSW. Appendix B, *Nationally Important Wetlands in NSW*, provides a listing of these wetlands by CMA area. The list includes some, but not all, of the State's SEPP 14 wetlands, which are clearly of state importance. To confirm whether a wetland falls under SEPP 14 or not, the Local Council should be contacted.

3.3. Using the Strahler Stream ordering system

Where stream ordering is used in the above definitions, this is determined using the Strahler system, which starts with 1st order at the top of the stream network (based on a 1:25,000 or next best available scale topographic map). The Strahler system is illustrated in Figure 1.

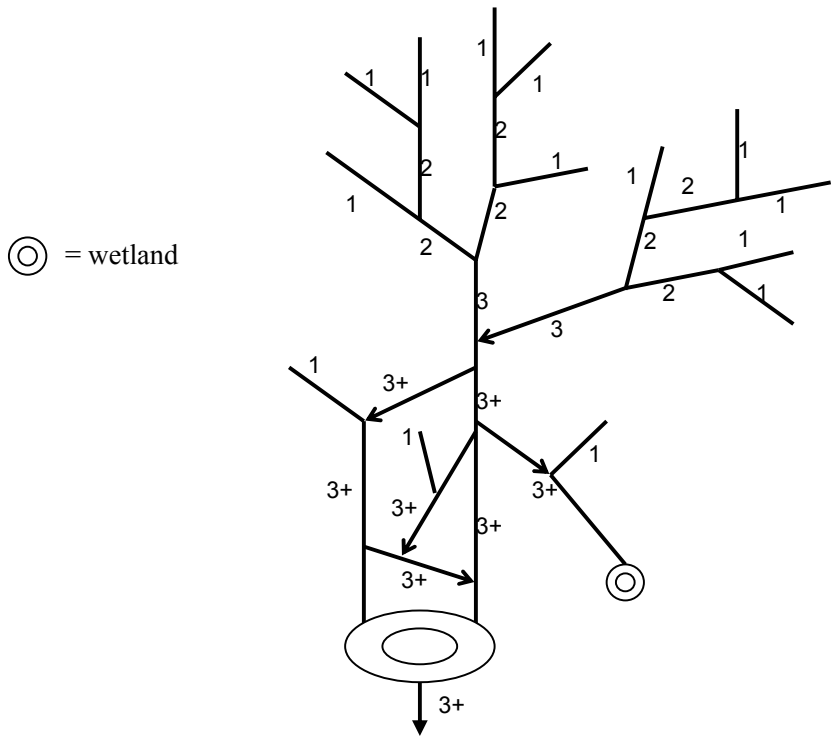


Figure 3.1: Modified Strahler stream ordering system

The adopted approach is designed to produce results that are consistent between catchments, but also recognise legitimate regional differences. It is also designed to be simple enough to be useful to practitioners in the field, but at the same time reflect the differentiation in Table 1.

Progressing upstream, rivers and creeks become progressively smaller and their default riparian buffer distance requirements reduce. For example, working upstream, the Murrumbidgee starts as a “major river” but it progressively dwindles to be a “minor river or major creek” and then to be a “minor creek” before it peters out altogether. Provision has also been made for streams, such as the Darling, that undergo name changes to be reflected in the listings in Appendix A.

3.4. Measuring buffer distances

For streams, riparian buffer distances are measured on both sides from top of bank if this is defined, otherwise from the centre of the stream. Where a stream has more than one bank on either side, the bank closest to the main channel should be used. Vegetation on and within the stream banks is also to be protected.

For wetlands, riparian buffer distances are measured on all sides from the wetland limit. Where a wetland has more than one bank, the bank closest to the wetland area should be used.

Where a clearing or offset site is adjacent to a wetland then the requirements for both streams and wetlands should be checked and the result which gives the greater riparian buffer distance should be adopted.

Note: References

Cotton Research and Development Corporation (2003), *Managing riparian lands in the cotton industry*, Narrabri.

Department of Environment and Heritage, 2001 *Nationally Important Wetlands in NSW*, Canberra.

Kingsford, R.T., Brandis, K., Thomas, R., Crighton, P., Knowles, E. and Gale, E., 2003. *Distribution of Wetlands in NSW,* Hurstville.

NSW Government, 1977. '*Restrictions on the removal of trees on NSW watercourses'.*

Note Bibliography

Askey- Doran M. 1999. 'Managing and rehabilitating riparian vegetation' in *Riparian Land Management Technical Guidelines Volume Two: On-ground Management Tools and Techniques.* Price, P. & Lovett, S. (eds) LWRRDC, Canberra.

(Caterall, 1993). 'The Importance of Riparian Zones to Terrestrial Wildlife' in *Ecology and Management of Riparian Zones in Australia.* Bunn, S.E et al (eds). Proceedings of a National Workshop on research and management needs for riparian zones in Australia, Marcoola, Southeast QLD April 13-14 1993.

DEH, 2001. 'Inland Water Theme Report' in *Australian State of the Environment 2001 (Theme Report).* Department of Environment and Heritage, Canberra. http://www.deh.gov.au/soe/2001/inland

Dickson, J.G. and Williamson J.H, 1988. 'Small mammals in streamside management zones in pine plantations' 375-378 in *Management of amphibians, reptiles and small mammals in North America*. General Technical Report USDA Forest Service, RM166:1-458. Cited in Anderson S. and Masters R., (2003). *Riparian Forest Buffers.* OSU Extension Facts, Division of Agricultural Sciences and Natural Resources, Oklahoma State University. http://www.ttrs.org.au/images/pdfs/f_5034%20Riparian%20Forest%20Buffers.pdf

DSNR, 2003. *Draft Riparian Corridor Management Study: covering all of the Wollongong Local Government Area and Calderwoood Valley in the Shellharbour Local Government Area.* NSW Department of Sustainable Natural Resources.

GBCMA, 2000. *Goulburn Broken Native Vegetation Plan Vol 2: Native Vegetation Retention Controls- Regional Guidelines for the Goulburn Broken Catchment Draft August 2000.* Goulburn Broken Catchment Management Authority.

Halse S.A. Jensen A. and Davis J.A, 1993. 'Riparian zone management in WA and SA: policy and practice' in *Ecology and Management of Riparian Zones in Australia.* Bunn,

S.E et al (eds). Proceedings of a National Workshop on research and management needs for riparian zones in Australia, Marcoola, Southeast QLD April 13-14 1993.

Hines H.B and the Southeast Queensland Threatened Frogs Recovery Team 2002. *Recovery plan for stream frogs of southeast Queensland 2001-2005.* Report to Environment Australia, Canberra. Queensland Parks and Wildlife Service, Brisbane.

Jansen A. and Robertson A., 2001. 'Relationship between livestock management and the ecological condition of riparian habitats along an Australian floodplain river' in *Journal of Applied Ecology,* 38, 63-75.

Jorgensen E. Canfield T. and Mayer P., 2002. *Research Needs in Riparian Buffer Restoration* Issue Paper Advances in Restoration Science No. 1. United States Environmental Protection Agency.
http://www.epa.gov.ada.download/issue/epa_600_s02_002.pdf

Lismore City Council, 2002. *Development Control Plan No. 27 Buffer Areas.* http://www.lismore.nsw.gov.au

Lovett S. and Price P., 2001. 'Land and Water Habitats' in *Managing Riparian Lands in the Sugar Industry: a guide to principles and practices.* Sugar Research & Development Corporation/ Land & Water Australia, Brisbane.

Lynch R.J. and Catterall C.P., 1999. 'Managing riparian land for terrestrial wildlife' in *Riparian Land Management Technical Guidelines Volume Two: On-ground Management Tools and Techniques.* Price, P. & Lovett, S. (eds) LWRRDC, Canberra.

Munks S, 1996. *A guide to riparian vegetation and its management.* Tasmanian Department of Primary Industries and Fisheries, Hobart.

NRE, 2002. *Victoria's Native Vegetation Management- A Framework for Action.* Department of Natural Resources and Environment. http://www.dse.vic.gov.au

NRM, 2003. Nebo-Broadsound Draft Regional Vegetation Management Plan 2003. QLD Department of Natural Resources Mines and Energy.
http://www.nrm.qld.gov.au/vegetation/pdf/nebo_broadsound/nebo_draft_rvmp.pdf

Prosser I. Karssies L. Ogden R. and Hairsine P., 1999. 'Using buffers to reduce sediment and nutrient delivery to streams' in *Riparian Land Management Technical Guidelines Volume Two: On-ground Management Tools and Techniques.* Price, P. & Lovett, S. (eds) LWRRDC, Canberra.

Thompson, L. Robertson, A. Jansen, A. and Davies, P. 2003. *Identifying Best Management Practices for Riparian Habitats in Gippsland Dairy Regions: Riparian Condition and Relationships with Farm Management.* Johnstone Centre, CSU Wagga Wagga.

4. Salinity Assessment

4.1 Introduction

The procedure involves calculating a salinity benefits index, which is a measure of the change in stream salinity from current levels arising from a change in land cover. At any given point along a stream network, stream salinity provides an integrated signature of the salinity processes operating in the area contributing to that point. The procedure is applicable to dryland catchments, but should not be used for irrigated areas.

The salinity benefits index value is used to determine whether the improve or maintain condition for a proposal to clear native vegetation is met and, if not met, the minimum level of offset (expressed in terms of the salinity benefits index) required to meet the improve or maintain test. Some basic hydrology and salinity related definitions are included at the end of this document.

It is assumed that if at a given point in a stream, the quantities of water and salt flowing past are known, and that certain physical characteristics of the area contributing to that point in the stream are also known, such as:

- mean annual rainfall
- soil hydraulic properties
- topography
- groundwater salinities
- soil salinities (preferred, but not widely available)
- land use

Then the water and salt loads at the measurement point can be apportioned to different parts of the catchment based on hydrologic principles and salt storage patterns. In other words, every part of a contributing catchment can be defined in terms of its contribution to catchment water yield and salt export.

The approach adopted here assumes that:

- there are two salt stores within the system: a soil salt store and a groundwater salt store;
- the salt from the soil salt store is mobilised by surface runoff and contributes to the salt load in quickflow;
- the salt from the groundwater salt store is mobilised by recharge and contributes to the salt load in baseflow;
- changing land cover can affect quickflow and baseflow in different proportions; and
- that soil and groundwater salinities are unaffected by land cover change

Therefore, to capture the different pathways for salt mobilisation and differences in the way that quickflow and baseflow are impacted by a land cover change, streamflow is separated into two flow components. Because salinities are constant, changes in salt load are determined by changes in quickflow and baseflow volumes only.

Thus to calculate a salinity benefits index, the catchment is conceptualised as a spatially variable source area for each of the following:

- quickflow;
- baseflow;
- quickflow salt load;

- baseflow salt load.

The spatial variability of each component can be represented by a source area map. For example, the source area map for quickflow describes the relative significance of every part of a catchment in terms of its contribution to quickflow.

Because quickflow and baseflow are influenced by land cover, when a land cover change is made, the source area distributions also change. We use the differences between the current condition and new condition source area maps to calculate new quickflow and baseflow volumes. The changes in quickflow and baseflow cause changes in their respective salt loads, and these new flows and salt loads are used to calculate an SBI.

4.2 Definitions

Streamflow

Streamflow is the total volume of water in a stream channel, usually for a specified time. It is measured at gauging stations and therefore is only known for discrete locations. In this model, streamflow (expressed in megalitres/year) is reported as an average annual for the period 1975-2000.

We assume that streamflow can be separated into two flow components: quickflow and baseflow.

Quickflow

Quickflow is the component of streamflow that is generated quickly during a rainfall event. It is sourced from surface runoff and lateral shallow subsurface runoff (i.e. pathways of water movement that are at or close to the ground surface). Quickflow is assumed to be a function of rainfall, soil, topography and land use.

Baseflow

Baseflow is the component of streamflow that travels more slowly from the catchment to the stream and tends to sustain flow in a channel between rainfall events. It is sourced from rainfall that has infiltrated deep into the soil profile to recharge groundwater. This pathway of flow is typically slower than surface runoff pathways. Baseflow is assumed to be a function of rainfall, soil and land use.

Recharge

Recharge refers to the component of rainfall that infiltrates (percolates) down through the soil, beyond the root zone of the vegetation cover and into the groundwater aquifer. Rates of recharge tend to be slow. Where recharge water is discharged from a groundwater aquifer into a stream, it contributes to baseflow.

Surface Runoff

We use the term surface runoff to refer to the component of rainfall that flows at or relatively close to the ground surface and which, when it reaches a stream channel, contributes to the quickflow component of streamflow. It includes surface runoff, and lateral shallow subsurface runoff.

Salt Load

Salt load is the quantity of salt carried by a stream, usually over a specified time. It is a function of the salinity of streamflow and the volume of streamflow:

*Salt Load (M) = Streamflow (V) * Salinity (M/V))*

In this model, salt loads (expressed in tonnes/year) are reported as average annual totals for the period 1975-2000.

Salinity

Stream salinity is the concentration of salt in a volume of water – in other words mass of salt per unit volume of water:

$$Salinity = \frac{Salt(M)}{Water(V)}$$

4.3 Assessment of the 'improve or maintain' test for salinity

4.3.1 General

A land cover change is deemed to improve or maintain instream salinity conditions, if there is no change in the long-term average stream salinity or if the long term average stream salinity decreases. The following general rules are used to interpret the salinity benefits index (SBI) for a proposed land cover change:

- If **SBI > 0**, then the proposal improves stream salinity outcomes, and there is no requirement for salinity offsets.
- If **SBI = 0**, indicates that at the reference location, there is no net change in average annual stream salinity, and there is no requirement for salinity offsets.
- If **SBI < 0**, then the proposal does not improve or maintain stream salinity outcomes. The proposal can only occur if actions are undertaken elsewhere on the property to offset the negative salinity impact.

These general rules apply to areas where clearing is proposed and to biodiversity offset areas.

4.3.2 Reference Location

In order to meet the "improve or maintain" requirement under the *Native Vegetation Act 2003* the SBI for clearing remnant vegetation from an area of land must be equal to or greater than zero at all points along the stream downstream of the area of change. Since there are only limited locations across the state at which streamflow and stream salinity data are collected, the practical implementation of this requirement is that the SBI be equal or greater than zero at both the nearest gauging station and the standard reference site for the larger catchment.

- **Local reference point** refers to the nearest downstream gauging station from a list approved by the Minister (see Tables 3-6 at the end of the document); and
- **Standard reference point** refers to a location (i.e. gauging station) approved by the Minister, close to where the average annual flow in the main river is a maximum and, in the case of the Hunter River, above the tidal limit. The interim standard reference points for the Murray-Darling Basin and Hunter catchments are listed in Table 4.1.

Table 4.1: Interim standard reference points for calculating Salinity Benefits Index

River system	Location
Border Rivers	Boggabilla
Castlereagh	Coonamble
Gwydir	Pallamallawa
Namoi	Boggabri
Macquarie	Baroona
Lachlan	Forbes
Murrumbidgee	Wagga Wagga
Hunter	Greta

4.3.3 Offset Areas

If offsets are required to mitigate against salinity impacts from a proposal to clear native vegetation, then the following rules are used to interpret the offset salinity benefits index relative to the clearing salinity benefits index (SBI):

- If $\mathbf{SBI_{offset} \geq 0}$ and $\mathbf{SBI_{offset} \geq |SBI_{clearing}|}$, then the cumulative impact of the clearing and offset actions improve salinity outcomes;
- If $\mathbf{SBI_{offset} \geq 0}$ and $\mathbf{SBI_{offset} < |SBI_{clearing}|}$, then the proposed offset provides a partial offset to the clearing impact, but the net outcome is that stream salinity is not improved or maintained. Additional or alternative salinity offsets are required;
- If $\mathbf{SBI_{offset} < 0}$, then no salinity benefit is gained and the proposed offset does not improve or maintain stream salinity outcomes.

The vertical lines around $|SBI_{clearing}|$ indicate the absolute value of $SBI_{clearing}$. In other words, this means $SBI_{clearing}$ values are treated as if they were positive, even when they are negative. To obtain consistent and meaningful results the evaluation of the SBIs for the impacts of a clearing proposal and any proposed offsets must be evaluated at the same reference point.

To ensure that there are no adverse local effects due to clearing, offsets or mitigating actions must be located higher in the landscape or catchment than the location that is the subject of the clearing application.

Figure 4.1(a) illustrates the problem of locating the offset area downstream of or in another catchment to that where clearing is proposed. The red line downstream of the clearing site indicates where a negative impact is registered, while the blue segment downstream of the offset site indicates a section where a positive impact is registered. Where the two tributaries join, the negative impact from the clearing is offset such that there is no net change in the average stream salinity when measured at the catchment outlet. However, within the catchment, there is a section of stream where stream salinity has increased, which means that the 'improve or maintain' test is not satisfied.

In the second illustration (Figure 4.1(b)), the offset is undertaken upstream of the clearing site, and there is a local benefit in the immediate area of the offset. Downstream, where the impacts of clearing would first be registered, there is no net change in stream salinity because the positive impacts of the offset site are already effective. In this example, the 'improve or maintain' test is passed.

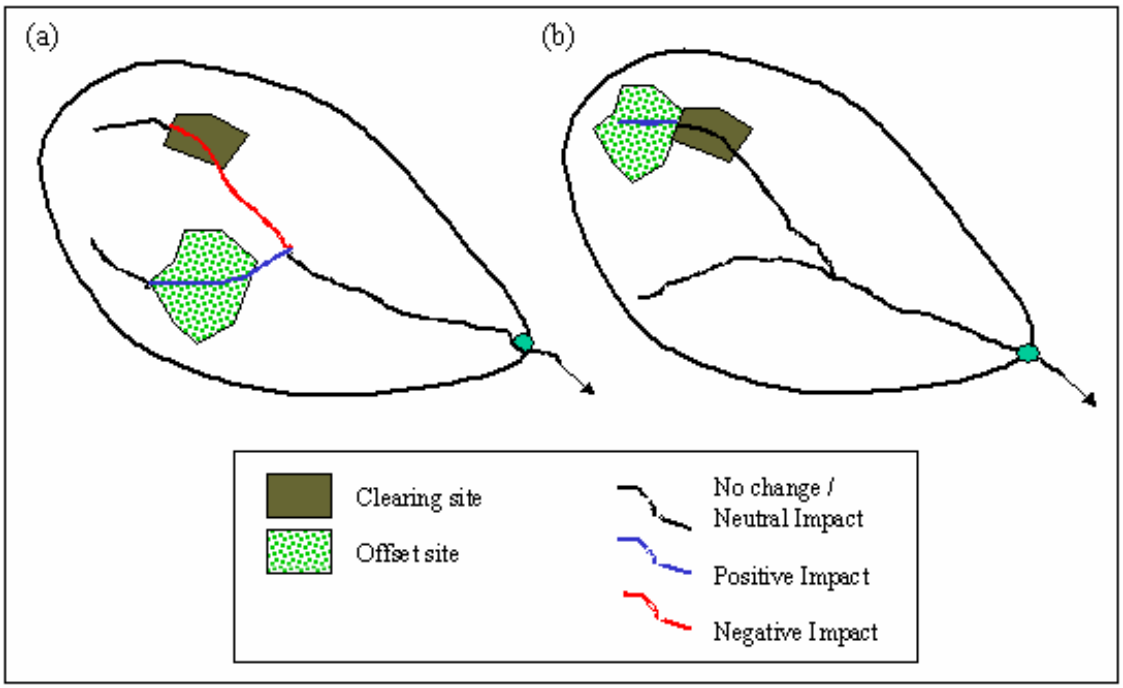


Figure 4.1: The location of the offset site relative to the site of clearing has implications for the improve or maintain test under the *Native Vegetation Act 2003*. In (a) an offset downstream of or in a separate tributary from an area of clearing causes an adverse impact before the effect of the offset is registered. In (b), the offset is effective upstream of the site of clearing and there is no adverse impact caused at any location downstream of the cleared area.

4.4 Calculating the salinity benefits index

The salinity benefits index is a measure of the relative change in stream salinity from current salinity levels at a specific location, caused by changes in land cover / management within an area of interest.

We calculate a raw salinity benefits index value, as follows:

$$SBI_{raw} = \frac{\frac{Salt_{current}}{Water_{current}} - \frac{Salt_{new}}{Water_{new}}}{\frac{Salt_{current}}{Water_{current}}} = \frac{Salinity_{current} - Salinity_{new}}{Salinity_{current}}$$

Where the subscript *current* refers to the mean annual salt load, water and salinity under current land cover conditions and subscript *new* refers to these same terms under the proposed land cover changes (Herron *et al*., 2004). This equation says that the raw salinity benefits index is the proportional change in stream salinity from current conditions caused by the land cover change.

Raw salinity benefits index values tend to be very small numbers because the impact that a small area of land cover change can have on stream salinity at the outlet of a large catchment is very small. The ratio of the area of land cover change to the area of the catchment in which the area of land cover change sits has a significant impact on the

salinity benefits index. To offset the influence of this area ratio on the salinity benefits index, we have scaled the raw salinity benefits index (SBI) up by 1000 000. So

$$SBI = SBI_{raw} * 1000\ 000.$$

The salinity benefits index is evaluated at a reference point and applies to the reference point only. A reference point is a location downstream of the area of proposed clearing or other land use/management change at which measured streamflow and salinity data are available (i.e. a gauging station). The period 1975-2000 serves as the standard benchmark period for all catchment salinity assessments in the Murray-Darling Basin Salinity Management Strategy (MDBMC, 2003), and has therefore been used for deriving mean annual streamflow and salt load estimates for use in the Salinity Tool in the PVP Developer.

4.4.1 Current Conditions

Measured Streamflow

Streamflow is monitored in New South Wales' rivers by a network of gauging stations. A subset of these gauging stations have been used to delineate the catchments used in the Salinity Tool for calculating the salinity benefits index. The selected gauging stations have good flow records and provide input data for the Integrated Quantity Quality Model (IQQM, DLWC (1995)) which is used in NSW for surface water resources management planning.

For current purposes, a **catchment** is the area upstream of a gauging station that contributes runoff and salt to the catchment outlet at the gauging station.

The daily streamflow record for each gauging station is split into quickflow and baseflow components, using a digital filter approach. This is a standard hydrologic procedure for separating long term continuous records.

Measured Salt Loads

Stream salinities are also measured at the select gauging stations, although the record is generally shorter than for streamflow monitoring. At some sites, continuous monitoring of salinity occurs; at others discrete measurements are taken from time to time.

Relationships between stream salinity and flow have been developed for each catchment based on the available data and these relationships are used to generate continuous time-series data of salinity, from which salt loads can be calculated.

Salt load is split into quickflow and baseflow salt loads using DIPNR models.

Spatial Data

A catchment is represented as a grid composed of square pixels (or cells) with sides of 25 m. To represent the spatial pattern of a particular catchment attribute, whether it is elevation, groundwater salinity, recharge or some other attribute, each pixel within a grid is assigned a numerical value representing the attribute value in that part of the catchment. Different catchment attributes, represented as individual grids, are combined to produce ***weighted*** surfaces, reflecting the contributions from each pixel to total quickflow, baseflow and associated salt loads.

The ***weighted*** surface is a source area map in which the magnitude of the value assigned to each pixel of a catchment reflects its contribution to the total. Table 4.2 lists the individual grid layers used to generate weighted surfaces for quickflow, baseflow, quickflow salt load and baseflow salt load.

Table 4.2: The catchment attributes combined to produce weighted surfaces for quickflow, baseflow, quickflow salt load and baseflow salt load. The → symbol indicates a processing step from the first attribute to a derived attribute.

Quickflow	**Baseflow**	**Quickflow Salt Load**	**Baseflow Salt Load**
Digital Elevation Model (DEM) → Compound topographic index (CTI)	Climate → Recharge	Soil Salinity	Groundwater salinity
Climate → Runoff	Soils → Recharge	Salt Outbreaks	Baseflow
Soils → Runoff		DEM → Flowpath length	
Land Cover	Land Cover	DEM → slope	
		Quickflow	

The proportional contribution, P_i, that cell *i* makes to some catchment total (eg. baseflow) is a function of the value of that cell, w_i, in the weighted grid relative to the sum of all the cell values (Σ = sum of) within the weighted grid, Σw_I:

$$P_i = \frac{w_i}{\sum w_i}$$

When P_i is multiplied by, for example, the mean annual baseflow for the catchment, the result is the volume of water contributed by pixel *i* to the total at the catchment outlet.

Factors influencing Quickflow and Baseflow

- *Rainfall* – influences the amount of water entering the system. Everything else being equal, a pixel with a high mean annual rainfall will be a more significant source of quickflow than one with low rainfall. Modelled rainfall grids (5 km grid resolution) are available for the whole country – these are based on interpolating between points where rainfall has been measured.
- *Soils* – different soils have different physical properties, which influence how readily they store and transmit water. The best available mapped soils data are used to define the spatial pattern of soils across each catchment. Soil hydraulic properties are assigned to each of the different soil types, based on measured data and, where measured data is not available, standard modelling techniques for deriving soil hydraulic properties.
- *Runoff* – the soil hydraulic properties and rainfall data have been used in the generation of a state-wide runoff grid. Water balance modelling was undertaken for every unique combination of climate zone and soil type occurring in the state to calculate average annual runoff (in mm). The spatial variability in runoff, as influenced by climate and soil type (i.e. no vegetation cover) is represented in the resultant runoff grid.

- *Recharge* – the soil hydraulic properties and rainfall data have been used in the generation of a state-wide recharge grid. Water balance modelling was undertaken for every unique combination of climate zone and soil type occurring in the state to calculate average annual recharge (in mm). The spatial variability in recharge, as influenced by climate and soil type (i.e. no vegetation cover) is represented in the resultant recharge grid.
- *Topographic position* – influences the re-distribution of catchment water between rainfall events. Places with large contributing areas and low local gradients tend to accumulate catchment water. As a result they are more likely to generate quickflow (i.e. shed water quickly) when it rains because their relatively high moisture content prevents them from infiltrating more rainfall. They also tend to be near the stream so delivery of runoff to the stream occurs quickly. Areas with low contributing areas and/or steep gradients tend to drain relatively quickly, which means that on average they tend to be relatively dry. When it rains, they can infiltrate more rainfall. These areas tend to be distant from streams, therefore they are less significant sources of quickflow. We use a modelled index, the compound topographic index (CTI of Beven and Kirkby (1979)) to reflect this characteristic.
- *Land cover* –influences the evapotranspiration term of the catchment water balance. Perennial vegetation types use more water through a year via evapotranspiration than annual vegetation types, which are active for only part of the year (Zhang *et al*., 2001). In general, trees use more water than perennial grass systems because they tend to have deeper root networks, and can access water stored deeper in the soil profile. Where there is no vegetation cover, the transfer of rainfall back to the atmosphere is by evaporation from the soil and this is restricted to a fairly shallow depth. These differences between vegetation types and cover influence the quantity of rainfall, which is available for quickflow and baseflow.

A water balance model is also used to calculate the weights assigned to each land cover class to reflect its influence on recharge and runoff. A bare soil condition is set as the reference condition and assigned a weighting of 1. Since plant cover has the effect of reducing runoff and recharge, relative to bare soil, the land cover weightings are between 0 and 1, where 0 is no runoff or recharge and 1 is the same runoff or recharge as bare soil.

The land cover/use grids that inform the model are cross-referenced to a look-up table which contains the land use weightings for runoff and recharge for every land cover/use type. These weightings vary from catchment to catchment.

Weighted Quickflow surface

A weighted quickflow surface, QF_w, is generated by combining the runoff grid (based on soil-rainfall data) with the CTI surface and the weighted land use surface for quickflow (LU_{qf}):

$$\mathbf{QF_w = Runoff * CTI * LU_{qf}}$$

Weighted Baseflow surface

A weighted baseflow surface, BF_w, is generated by combining the recharge grid (based on soil-rainfall data) and the weighted land use surface for baseflow (LU_{bf}).

$$BF_w = Recharge * LU_{bf}$$

Factors influencing Salt Load

- *Soil Salinity* – reflects the concentration of salt in the soil and available for mobilisation by quickflow. Everything else being equal, areas of high salinity are assumed to be more significant source areas of salt than areas of low salinity. Soil salinity spatial units are based on mapped soil type or geology, salt outbreak areas and landscape position. Estimates of soil salinity for each spatial unit are based on measured data and generalisations from point data to the wider area. Soil salinity is adjusted by topographic factors to account for landscape connectivity. In other words, each pixel is weighted to reflect the concentration of salt that the quickflow generated on the pixel would acquire in its journey to the stream. If a pixel is close to the stream, its weighting will be less than a pixel that is far away from the stream network, everything else being equal. Furthermore, if quickflow from two pixels must travel the same distance to the stream, but the pathway for one pixel is through very saline cells, while the other pathway is through relatively non-saline cells, the pixel with the more saline pathway will have the higher weighting.
- *Groundwater salinity* – reflects the concentration of salt in groundwater and contributing to baseflow salt loads. Areas with high groundwater salinities are assumed to be more significant source areas of salt than areas of low groundwater salinity. Groundwater salinity spatial units are defined on the basis of groundwater flow systems mapping, and each unit is assigned a salinity value based on measured data and extrapolation from measured data to the wider area.

Weighted Quickflow salt load surface

As quickflow salt load is a function of soil salinity and volume of quickflow, the weighted quickflow salt load grid, S_{QFw}, is generated by combining the weighted quickflow grid with the weighted soil salinity grid, $SoilEC_w$:

$$S_{QFw} = QF_w * SoilEC_w$$

Weighted Baseflow salt load surface

As baseflow salt load is a function of groundwater salinity and volume of baseflow, the weighted baseflow salt load grid, S_{BFw}, is generated by combining the weighted baseflow grid with the groundwater salinity grid, $GWEC_w$:

$$S_{BFw} = BF_w * GWEC$$

4.4.2 Land Cover Change Scenario

Once the distribution of catchment exports is defined for current land use conditions, different land use changes can be modelled and the change in mean annual salt loads and streamflow estimated.

The land cover term is the only variable in the model. All of the other catchment characteristics are assumed to not change. When land cover is changed, the amount of rainfall that returns to the atmosphere changes, as do the amounts of rainfall that become runoff (quickflow) and recharge (baseflow).

If we convert an area of annual crops to woodland, we reduce runoff and recharge. In the model, the weightings for cropping, which might be around 0.7 or 0.8, are changed to the appropriate land cover weightings for woodland, which are more like 0.2 or 0.3. This causes our weighted quickflow and baseflow surfaces to change – in this instance the sum of the weighted grids for quickflow and baseflow under the proposed land use change are lower than under the current conditions. We compare the sum of the weighted grid under the new condition to that for the current condition. The ratio, which in this case will be less than 1, is multiplied by the mean annual quickflow (baseflow) to obtain a new mean annual quickflow (baseflow).

A change in quickflow and baseflow volumes influences the export of salt from the affected area and the weighted quickflow salt load and baseflow salt surfaces also change. Using the same approach, we can calculate the new salt load for the land cover change.

The new exports are calculated as follows:

Quickflow

$$QF^{new} = \frac{\sum QF_w^{new}}{\sum QF_w} * QF_{ann}$$

Baseflow

$$BF^{new} = \frac{\sum BF_w^{new}}{\sum BF_w} * BF_{ann}$$

Quickflow Salt Load

$$S_{QF}^{new} = \frac{\sum S_{QFw}^{new}}{\sum S_{QFw}} * S_{QF}^{ann}$$

Baseflow Salt Load

$$S_{BF}^{new} = \frac{\sum S_{BFw}^{new}}{\sum S_{BFw}} * S_{BF}^{ann}$$

Where *QF* is quickflow, *BF* is baseflow, *S* is salt load and *new* denotes parameters for the new land use scenario. These equations compare the sum of all the cells in the weighted grid for the new land use scenario to that of the current land use for each flow and salt component and multiply the ratio by the current mean annual quickflow, QF_{ann}, baseflow, BF_{ann}, quickflow salt load, S_{QF}^{ann} and baseflow salt load, S_{BF}^{ann}, respectively.

Thus, using information about current exports and the best available hydrologic and salt storage data, estimates of the impacts of land use changes on average annual streamflow and salt load can be derived.

Finally, the salinity benefits index is calculated by:

- summing together quickflow and baseflow for current conditions and for the new conditions to produce total streamflows for current and new conditions;

- summing together the quickflow and baseflow salt loads for current conditions and the new conditions to produce current and new total salt loads;
- putting these values into the salinity benefits index equation (page 2) to obtain a raw salinity benefits index;
- scaling up by 1 000 000; and
- rounding to the nearest whole (integer) number.

4.5 Catchments where data is available for the Land Use Options Simulator

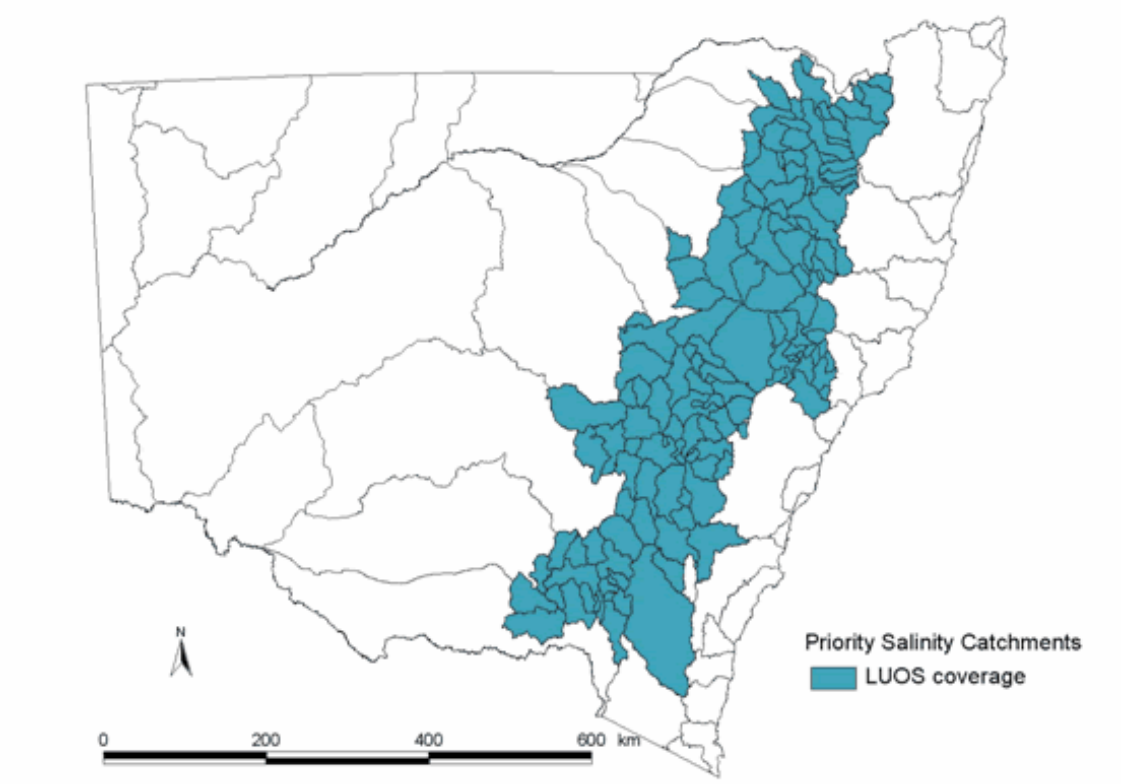


Figure 4.2. Catchments in New South Wales covered by the Salinity Tool.

Table 4.3: Border Rivers/Gwydir and Namoi

Border Rivers		Namoi	
416003	Tenterfield Creek	419001	Namoi River @ Gunnedah
416006	Severn River @ Ashford	419005	Namoi River @ North Cuerindi
416008	Beardy River @ Haystack No 4	419006	Peel River @ Carrol Gap
416010	Macintyre River @ Wallangra	419007	Namoi River @ Keepit Dam
416012	Macintyre River @ Holdfast	419012	Namoi River @ Boggabri
416020	Ottleys Creek @ Coolatai	419015	Peel River @ Piallamore
416021	Frazers Creek @ Ashford	419016	Cockburn River
416026	Reedy Creek	419020	Manilla River @ Briabri
416032	Mole River @ Donaldson	419022	Namoi River @ Manilla Railway Bridge

416039	Severn River @ Strathbogie	419024	Peel River @ Paradise Weir
Gwydir		419027	Mooki River
418001	Gwydir River @ Pallamallawa	419029	Halls Creek
418005	Copes Creek	419032	Coxs Creek
418012	Gwydir River @ Pinegrove	419035	Goonoo Goonoo Creek
418013	Gwydir River @ Gravesend Bridge	419036	Duncans Creek
418015	Horton River	419043	Manilla River @ Tarpoly Weir
418016	Warialda Creek	419045	Peel River @ Chaffey Dam
418017	Myall Creek	419051	Maules Creek
418018	Keera Creek		
418021	Laura Creek		
418022	Georges Creek		
418023	Moredun Creek		
418025	Halls Creek		
418026	Gwydir River @ Copeton Dam		
418029	Gwydir River @ Stonybatter		
418032	Tycannah Creek		
418033	Bakers Creek		

Table 4.4: Murrumbidgee and Murray

Murrumbidgee			
410001	Murrumbidgee River @ Wagga Wagga	410048	Kyeamba Creek
410004	Murrumbidgee River @ Gundagai	410057	Goobarragandra River
410025	Jugiong Creek	410059	Gilmore Creek
410026	Yass River	410061	Adelong Creek
410038	Adjungbilly Creek	410071	Brungle Creek
410039	Tumut River @ Brungle Bridge	410073	Tumut River @ Oddy's Bridge
410043	Hillas Creek	410087	Bullenbung Creek
410044	Muttama Creek	410103	Houlaghans Creek
410045	Billabung Creek		
410047	Tarcutta Creek	**Murray**	
		410091	Billabong Creek @ Walbundrie

Table 4.5: Castlereagh, Macquarie and Lachlan

Macquarie		**Castlereagh**	
421001	Macquarie River @ Dubbo	420004	Castlereagh River @ Mendooran
421007	Macquarie River @ Bathurst	420007	Castlereagh River @ Binnaway
421018	Bell River		
421019	Cudgegong River @ Yamble Bridge	**Lachlan**	

421025	Macquarie River @ Bruinbun	412002	Lachlan River @ Cowra
421026	Turon River	412004	Lachlan River @ Forbes
421035	Fish River	412009	Belubula River @ Canowindra
421040	Macquarie River d/s Burrendong Dam	412028	Abercrombie River
421041	Crudine Creek	412029	Boorowa River
421042	Talbragar River	412030	Mandagery Creek
421048	Little River	412043	Goobang Creek
421052	Lewis Creek	412050	Crookwell River
421053	Queen Charlottes Creek	412055	Belubula River @ Bangaroo Bridge
421058	Wyaldra Creek	412057	Lachlan River @ Nanami
421059	Buckinbah Creek	412065	Lachlan River @ Narrawa
421066	Pyramul Creek	412067	Lachlan River @ Wyangala Dam
421072	Winburndale Creek	412072	Back Creek
421073	Meroo Creek	412077	Belubula River @ Carcoar
421079	Cudgegong River @ Windamere Dam Site	412080	Flyers Creek
421101	Campbells River	412092	Coombing Creek

Table 4.6: Hunter and Hawkesbury (Capertee, Wollondilly and Wolgan)

Hunter		**Hunter**	
210055	Hunter River @ Denman	210002	Hunter River @ Muswellbrook Br
210044	Glennies Creek @ Middle Falbrook	210052	Pages River @ Gundy Recorder
210090	Martindale Creek near Martindale		
210089	Black Creek @ Rothbury	**Capertee**	
210088	Dart Brook @ Aberdeen No.2	212018	Capertee River @ Glen Davis
210087	Doyles Creek @ Doyles Creek	**Wolgan**	
210071	Glendon Brook @ Glendon Brook	212028	Wolgan River @ Newnes
210040	Wybong Creek @ Wybong	**Wollondilly**	
210031	Goulburn River @ Sandy Hollow	212270	Wollondilly River @ Jooriland
210014	Rouchel Brook @ Rouchel Brook (The Vale)	212271	Wollondilly River @ Golden Valley
210064	Hunter River (Singleton-Greta)		

Note: References

Beven, K.J. and Kirkby, M.J. (1979) A physically based, variable contributing area model of basin hydrology, *Hydrological Sciences Bulletin*, *24*(1), 43-69.

Department of Land and Water Conservation (1995) Integrated Quantity-Quality Model (IQQM) Reference Manual, NSW DLWC, Sydney

Herron, N.F., Peterson, P. and Black, D. (2004) *The Salinity Benefits Index: A Method for Calculating the Impacts of Land Use Change on Stream Salinities*, NSW Department of Infrastructure Planning and Natural Resources, Sydney, Australia, 23pp

Murray-Darling Basin Commission Ministerial Council (2003). Basin Salinity Management Strategy Operational Protocols. Murray-Darling Basin Commission, Canberra.

Zhang, L., Dawes, W. R. and Walker, G. R. (2001) The response of mean annual evapo-transpiration to vegetation changes at catchment scale, *Water Resources Research*, *37*(3) 701-708.

5. Biodiversity Assessment

5.1. Introduction

This Assessment Methodology defines the circumstances in which broadscale clearing is to be regarded as improving or maintaining environmental outcomes for biodiversity (excluding listed threatened species, burning and some forms of invasive scrub) for the purposes of agreeing to a Property Vegetation Plan under the *Native Vegetation Act 2003*.

BioMetric is an Excel based tool that facilitates rapid assessments of biodiversity to support decision-making with respect to clearing of, and incentives for, native vegetation.

The information required for assessment of clearing proposals is provided in databases in ***BioMetric,*** or by the assessor at the site using procedures provided with ***BioMetric***. ***BioMetric*** is the software tool that performs the calculations according to the procedures in these Assessment Guidelines, using the equations below and the databases in ***BioMetric***. The information in the databases in ***BioMetric*** is described in the Glossary (Part 5.6) and Appendix C and D of this Assessment Methodology. All equations used for calculations in ***BioMetric*** are included in this Part of this Assessment Methodology.

5.2. Assessing thinning to benchmark stem densities

Thinning means clearing that comprises only the removal of individual trees or shrubs.

This Part does not apply to proposed thinning of the following species: turpentine, hopbushes, budda, punty bush, or silver cassia.

Note The Assessment Methodology and **BioMetric** may not be suitable for some assessing thinning of other forms of invasive scrub, including some tree species such as cypress pine.

5.2.1 The Improve or Maintain Test

Thinning is to be regarded as improving or maintaining environmental outcomes if, in relation to each vegetation zone:

1. thinning is proposed on no more than 80% of the area of the zone; and
2. the stems to be removed from each stem diameter class for the vegetation type do not exceed the number calculated by ***BioMetric***.

5.2.2 The Assessment

Different vegetation types must be assessed separately. If the area proposed to be thinned contains more than one vegetation type the proposal must be divided into vegetation zones each comprising a relatively homogenous vegetation type. Each zone must be separately assessed.

Within each vegetation zone, 0.1 hectare plots must be randomly placed every two hectares, with a minimum of one plot and a maximum of 10 plots per vegetation zone.

In relation to each plot the stems must be classified into one of the following stem diameter classes: 0-10 cm, 11-20 cm, and 21-30 cm dbh.

The number of stems per plot in each stem diameter class must be recorded.

These plots are used to predict the number of trees for the vegetation type in each stem diameter class within the vegetation zone.

Benchmark data for stem densities are provided with ***BioMetric***, or obtained from reference sites. Reference sites must:

- comprise the same vegetation community and be located in the same region as the vegetation zone being assessed;
- contain vegetation in relatively unmodified condition; and
- be measured as near in time to the vegetation zones being assessed so as to allow seasonal variation in **condition** to be taken into account.

BioMetric calculates the maximum number and percentage of existing stems in each diameter class that can be removed by comparing stem density in the zone by diameter class, with benchmark stem densities by diameter class.

Stems can be thinned to the benchmark values of stem densities for each diameter class. That is:

> Thinning is permitted WHILE $Observed\ stems_{ij} \geq Benchmark\ stems_{j}$
> ELSE
> Thinning proposals must be assessed as for other clearing proposals
> where
> $Observed\ stems_{ij}$ is the median number of stems observed in the *j*th diameter class within the *i*th vegetation Zone
> $Benchmark\ stems_{j}$ is the benchmark number of stems for the vegetation type observed on the site for the *j*th diameter class.

5.3 Overcleared vegetation and landscapes

This Part applies to clearing that is not thinning to benchmark stem densities.

5.3.1 The improve or maintain test

Clearing of overcleared vegetation is not to be regarded as improving or maintaining environmental outcomes for biodiversity.

Overcleared vegetation is native vegetation that:

1) is not highly modified, **and**
2) is either:
   a) in an overcleared landscape, or

b) an overcleared vegetation type, or
c) an ecological community listed as critically endangered, endangered or vulnerable under either the *Threatened Species Conservation Act 1995 (NSW)* or the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*

Offsets cannot be used to balance the impacts of clearing in these circumstances.

The area to be cleared must be divided into zones comprising relatively homogenous vegetation types and condition categories. If the area to be cleared comprises more than one zone separate assessments must be undertaken for each zone.

5.3.2 Determining whether the vegetation is highly modified

Vegetation that is highly modified is defined as follows:

- woody vegetation: Vegetation with a projective foliage cover of the over-storey that is <50% of the benchmark minimum for that vegetation community and in which <50% of the perennial ground cover is native species;
- grassland or herbland: Vegetation in which <50% of the perennial ground cover is native.

Projective foliage cover is equivalent to the amount of shadow that would be cast on the ground if there were a light source directly overhead.

5.3.3 Determining whether the vegetation is in an overcleared landscape

An overcleared landscape is a Mitchell landscape area in which more than 70% of native vegetation cover has been cleared. The Mitchell landscape and whether it is overcleared are identified from the ***BioMetric*** database (Appendix C).

Mitchell landscape areas are defined in Mitchell, P.B. (2002). NSW ecosystems study: background and methodology. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville; and in Mitchell, P.B. (2003). NSW ecosystems database mapping unit descriptions. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville.

5.3.4 Determining whether the vegetation is an overcleared vegetation type

An overcleared vegetation type is a vegetation type of which more than 70% has been cleared within the relevant Catchment Management Authority (CMA) area (Appendix D).

The vegetation type and whether it is an overcleared vegetation type is identified from the list of vegetation types in the ***BioMetric*** database. Vegetation types are listed by CMA area. They are generally described at the classification level of association; classification level varies between CMA areas. Classification levels of vegetation types are defined in Executive Steering Committee for Australian Vegetation Information (2003). Australian Vegetation Attribute Manual Version 6.0. Department of Environment and Heritage, Canberra.

5.4. Assessing impacts of clearing generally

This Part does not apply to:

- clearing that is thinning to benchmark stem densities (under Part 5.2); or
- clearing of overcleared vegetation (under Part 5.3).

5.4.1 Improve or maintain test

Clearing is to be regarded as improving or maintaining environmental outcomes for biodiversity if

1) the differences between current site value and site value following clearing is zero or positive; or
2) where an offset is proposed in addition to the clearing:
   (a) improvement in *Site Value* in the offset is equal to or greater than losses from clearing; and
   (b) improvement in *Landscape Value* in the offset is equal to or greater than losses from clearing; and
   (c) the offset is in a vegetation type or types of equal or greater *Regional Value* as the development site.

5.4.2 Assessing site value

Site Value for both proposed clearing and proposed offsets is calculated as:

$$\sum_{i=1}^{n}\left(\left(\left(a+b+c+d+e+f+g+h+i+j+\left(a\times f\right)+\left(a\times g\right)+\left(b\times j\right)+\left(h\times i\right)\right)\div 6150\right)\times 100\times ZoneArea\right)_i$$

where
i is the *n*th vegetation Zone
a-j are variables defined in Table 1
6150 and 100 are constants used to scale the score from 0-100
Zone*Area* is the total area of the *i*th Zone in hectares

Table 1. Methods used to calculate the values for variables *a-j* where B_x is the benchmark value for the variable *x*, $B_{x\min}$ refers to the lower benchmark value for variable *x* and $B_{x\max}$ refers to the upper benchmark value for variable *x*. The number of points allocated to the measured value for each variable is multiplied by the relevant % weighting.

	Variable	**0 points**	**1 point**	**2 points**	**3 points**	**% weighting**
a	Native plant species richness	=0	>0AND<(0.5*B_a)	≥ (0.5*B_a)AND<B_a	≥ B_a	20
b	Native overstorey projective foliage cover	≤ (0.1*$B_{b\min}$) OR >(2*$B_{b\max}$)	>(0.1*$B_{b\min}$)AND<(0.5*$B_{b\min}$) OR >(1.5*$B_{b\max}$)AND≤ (2*$B_{b\max}$)	≥ (0.5*$B_{b\min}$)AND<$B_{b\min}$ OR >$B_{b\max}$AND≤ (1.5*$B_{b\max}$)	≥ B_{bmin} AND ≤ B_{bmax}	5
c	Native mid-storey projective foliage cover	≤ (0.1*$B_{c\min}$) OR >(2*$B_{c\max}$)	>(0.1*$B_{c\min}$)AND<(0.5*$B_{c\min}$) OR >(1.5*$B_{c\max}$)AND≤ (2*$B_{c\max}$)	≥ (0.5*$B_{c\min}$)AND<$B_{c\min}$ OR >$B_{c\max}$AND≤ (1.5*$B_{c\max}$)	≥ B_{cmin} AND ≤ B_{cmax}	5
d	Native ground projective foliage cover (grasses)	≤ (0.1*$B_{d\min}$) OR >(2*$B_{d\max}$)	>(0.1*$B_{d\min}$)AND<(0.5*$B_{d\min}$) OR >(1.5*$B_{d\max}$)AND≤ (2*$B_{d\max}$)	≥ (0.5*$B_{d\min}$)AND<$B_{d\min}$ OR >$B_{d\max}$AND≤ (1.5*$B_{d\max}$)	≥ B_{dmin} AND ≤ B_{dmax}	5
e	Native ground projective foliage cover (shrubs)	≤ (0.1*$B_{e\min}$) OR >(2*$B_{e\max}$)	>(0.1*$B_{e\min}$)AND<(0.5*$B_{e\min}$) OR >(1.5*$B_{e\max}$)AND≤ (2*$B_{e\max}$)	≥ (0.5*$B_{e\min}$)AND<$B_{e\min}$ OR >$B_{e\max}$AND≤ (1.5*$B_{e\max}$)	≥ B_{emin} AND ≤ B_{emax}	5
f	Native ground projective foliage cover (other)	≤ (0.1*$B_{f\min}$) OR >(2*$B_{f\max}$)	>(0.1*$B_{f\min}$)AND<(0.5*$B_{f\min}$) OR >(1.5*$B_{f\max}$)AND≤ (2*$B_{f\max}$)	≥ (0.5*$B_{f\min}$)AND<$B_{f\min}$ OR >$B_{f\max}$AND≤ (1.5*$B_{f\max}$)	≥ B_{fmin} AND ≤ B_{fmax}	10
g	Exotic plant projective foliage cover	≥ 90	>50AND<90	>20AND≤ 50	≤ 20%	5
h	Number of trees with hollows	=0 (unless B_h includes 0)	>0AND<(0.5*B_h)	≥ (0.5*B_h)AND<B_h	≥ B_h	30
I	Proportion of overstorey species occurring as regeneration	=0	>0AND<0.5	≥ 0.5AND<1	1	10
j	Total length of fallen logs	≤ (0.1*B_j)	>(0.1*B_j)AND<(0.5*B_j)	≥ (0.5*B_j)AND<B_j	≥ B_j	5

Change in site value with clearing

Change in site value with clearing is determined from the difference between the current site value and the predicted site value following clearing. Site value is calculated from site condition in the zone(s) and area(s) of the zone(s), using the above equation.

Current site condition is determined by:

(i) Measuring the condition variables - native plant species, native over-storey cover, native mid-storey cover, native ground cover (grasses), native ground cover (shrubs), native ground cover (other), exotic plant cover, number of trees with hollows, overstorey regeneration, and length of fallen logs - in plots in the vegetation zone(s) proposed for clearing, and
(ii) Assigning values to these condition variables by comparing the measured values of the condition variables with benchmark values for the same variables. Benchmarks are values for each condition variable in relatively unmodified examples of the same vegetation community (see Glossary). The assessor allocates a score of 0-3 (0=low, 1=moderate, 2=high, 3=very high) to each condition variable from the difference between its measured value and its benchmark value.

Current site condition is measured as follows:

(i) Establish plots in each vegetation zone in approximate proportion to the area of the zone. Randomly place one plot every two hectares, with a minimum of one plot and a maximum of 10 plots per vegetation zone;
(ii) Measure data for the condition variables in the vegetation zone(s) in the clearing proposal;
(iii) Enter the measured condition data into ***BioMetric***;
(iv) Enter benchmark data for the vegetation community directly into ***BioMetric*** either from information provided with ***BioMetric*** or data obtained from reference sites;
(v) The measured data and the benchmark data for condition variables entered into ***BioMetric*** generate a score for the current site condition of the native vegetation in the zone using the above equations.

The condition scores for current site condition are multiplied in ***BioMetric*** by the area of the zone(s) to provide the measure of current site value, using the above equations.

Site value following clearing is determined by:

(i) Predicting the impact of clearing on each condition variable according to the type of clearing, using the information provided with ***BioMetric***, and
(ii) Multiplying the predicted condition in the vegetation zone(s) with clearing by the area of the zone(s).

The condition scores for site condition with clearing are multiplied in ***BioMetric*** by the area of the zone(s) to provide the measure of site value following clearing, using the above equations for calculating site value.

Change in site value with the offset(s)

Change in site value with the offset is determined from the difference between current site value and predicted site value with the offset.

Current site condition is determined by:

(i) Measuring the condition variables - native plant species, native over-storey cover, native mid-storey cover, native ground cover (grasses), native ground cover (shrubs), native ground cover (other), exotic plant cover, number of trees with hollows, overstorey regeneration, and length of fallen logs - in plots in the vegetation zone(s) proposed for offset(s), and
(ii) Assigning condition values to these variables by comparing the measured values of the condition variables with benchmark values for the same variables. Benchmarks are values for each condition variable in relatively unmodified examples of the same vegetation community (see Glossary). The assessor allocates a score of 0-3 (0=low, 1=moderate, 2=high, 3=very high) to each condition variable from the difference between its measured value and its benchmark value.

Current site condition is measured as follows:

(i) Establish plots in each vegetation zone in approximate proportion to the area of the zone. Randomly place one plot every two hectares, with a minimum of one plot and a maximum of 10 plots per vegetation zone;
(ii) Measure data for the condition variables in the vegetation zone(s) in the proposed offset;
(iii) Enter the measured condition data into ***BioMetric***;
(iv) Enter benchmark data for the vegetation community directly into ***BioMetric*** either from information provided with ***BioMetric*** or data obtained from reference sites;
(v) The measured data and the benchmark data for condition variables entered into ***BioMetric*** generate a score for the current site condition of the native vegetation in the zone.

The condition scores for current site condition are multiplied in ***BioMetric*** by the area of the zone(s) to provide the measure of current site value, using the above equations for calculating site value.

Site value with offsets is determined by:

(i) Predicting the future score for each condition variable for the vegetation zone(s) in the offset(s) with the proposed management actions in the offset(s), using information provided with ***BioMetric***. Eight general management actions can be undertaken by the landholder to improve condition variables in the offset. Management actions can increase the future score for the condition variables (except tree hollows) by a maximum of one level. The condition score for tree hollows cannot change, and
(ii) Multiplying the predicted condition in the vegetation zone(s) with the offset(s) actions by the area of the zone(s).

The condition scores for site condition with the offset(s) are multiplied in ***BioMetric*** by the area of the zone(s) to provide the measure of site value with the offset(s), using the above equations for calculating site value.

5.4.3 Assessing regional value

Regional value is the percentage of its original extent that a vegetation type has been cleared in the catchment. The greater the percentage of the original extent of a vegetation type that has been cleared the higher is its regional value.

Regional value is calculated from the relationship between the percentage(s) of the vegetation type(s) that is/are cleared relative to its/their pre-European (or pre-1750) extent(s).

In relation to both the proposed offset and the proposed clearing the assessor enters the area(s) of vegetation zones, and inserts the vegetation type(s) to be cleared from the pull down menu in the database in ***BioMetric***. ***BioMetric*** calculates overall regional value for the vegetation type(s) in the proposal using the equation set out below.

Regional Value of both a proposed offset and proposed clearing is calculated using:

(a) the % that each vegetation type has been cleared relative to predicted pre-European levels;
(b) a generic species-area relationship; and
(c) the proportion of the site occupied by each vegetation type using the equation:

$$\sum_{i=1}^{n}\left(\left(1-\left(1-\left(\frac{\%cleared}{100}\right)\right)^{0.25}\right)\times\left(\frac{ZoneArea}{TotalArea}\right)\times 100\right)_i$$

where
i is the *n*th vegetation Zone (of either the clearing or offset);
%*cleared* is the % of the vegetation type in the *i*th vegetation Zone that is cleared;
Zone*Area* is the area of the *i*th Zone in hectares; and
TotalArea is the sum of the area of all Zones in the proposal in hectares.

5.4.4 Assessing change in landscape value

Change in landscape value from clearing

Change in landscape value with clearing is calculated as the difference between current landscape value and landscape value with clearing using the equations below.

Landscape value encompassses fragmentation, connectivity and adjacency of native vegetation up to 1000 ha around the clearing proposal. The assessor determines change in landscape value from clearing using the following measures:

(i) Percent native vegetation cover in the landscape. This is current vegetation cover and future vegetation cover (with proposed clearing) within radii of 1.75 km (1000 ha), 0.55 km (100 ha) and 0.2 km (10 ha) around the proposal site, estimated in categories of 0-10%, 11-30%, 31-70%, or >70% cover;
(ii) Connectivity. The current and future (with proposed clearing) connectivity values are assessed as high, moderate, low, or nil to determine the change in connectivity value with clearing;
(iii) Total adjacent remnant area. This is the total remnant area of which the clearing proposal is a part recorded as large, medium, small, or zero. This is assessed for current landscape value only, as adjacent remnant area is lost with clearing.

Landscape value is assessed separately for each of the proposed offset and the proposed clearing once only, regardless of the number of vegetation zones proposed for clearing and offsets. The centre of the radii is the approximate centre of the vegetation zone if one zone is involved, and is the centre of the vegetation zone which loses the most landscape value from clearing if more than one vegetation zone is proposed for clearing. ***BioMetric*** calculates change in landscape value with clearing using the equations below.

Change in landscape value with offset(s)

Change in landscape value with the offset(s) is calculated as the difference between current landscape value in the offset zone(s) and landscape value in the offset zone(s) with the management actions for the offset, using the equations below.

Landscape value encompasses fragmentation, connectivity and adjacency of native vegetation up to 1000 ha around the site. The assessor determines change in landscape value with the offset using the following measures:

(i) Percent native vegetation cover in the landscape (see above).
(ii) Connectivity (see above).
(iii) Total adjacent remnant area (see above).
(iv) Riparian area. The assessor records whether the offset has >25%, 26%-50%, 51%-75%, >75% of its area within a riparian area.

The *Landscape Value* formulae are:

$$\left(Landscape\,Value_{Current}\right)_{Clearing\ site} = \left(a+b+c+d+e\right)$$

$$\left(Landscape\,Value_{With\ development}\right)_{Clearing\ site} = \left(a+b+c+d\right)$$

$$\left(Landscape\,Value_{Current}\right)_{Offset\ site} = \left(a+b+c+d\right)$$

$$\left(Landscape\,Value_{With\ offsets}\right)_{Offset\ site} = \left(a+b+c+d+e+f\right)$$

where
a = % cover of native vegetation within a 1.75km radius of the site (1000ha)
b = % cover of native vegetation within a 0.55km radius of the site (100ha)
c = % cover of native vegetation within a 0.2km radius of the site (10ha)
d = connectivity value
e = total adjacent remnant area
f = % within riparian area

Details of these variables are provided in Tables 2, 3 and 4.

Table 2. Details of variables used to calculate *Landscape Value*. See Table 3 for criteria for connectivity value and Table 4 for criteria for total adjacent remnant area. The score for each variable is multiplied by its weighting.

Variable	0 points	1 point	2 points	3 points	Weighting
% cover of native vegetation within a 1.75km radius of the site (1000ha)	0-10%	11-30%	31-70%	>70%	9.99
% cover of native vegetation within a 0.55km radius of the site (100ha)	0-10%	11-30%	31-70%	>70%	6.66
% cover of native vegetation within a 0.2km radius of the site (10ha)	0-10%	11-30%	31-70%	>70%	3.33
Connectivity value (see Table 3)	Nil	Low	Moderate	High	6.66
Total adjacent remnant area (see Table 4)	Small	Medium	Large	Very large	6.66
% within riparian area	0-25%	26-50%	51-75%	>75%	6.66

Table 3. Criteria for assessing connectivity. Good condition = not highly modified according to the definition in Part 5.3.2.

Connectivity value	**Definition**
High	Native vegetation in good condition >100m wide that forms a sole link between other native vegetation in good condition
Moderate	Highly modified native vegetation >100m wide or native vegetation in good condition 50-100m wide that forms part of a sole link between other vegetation in good condition
Low	Highly modified native vegetation >100m wide or native vegetation in good condition >50m wide that is part of one of several links to other native vegetation in good condition
Nil	None of the above

Table 4. Criteria for assessing total adjacent remnant area. Adjacent remnant area refersto the area (ha) of contiguous vegetation that is not highly modified within 100m of the site.

Level for total adjacent remnant area	**% native vegetation cleared in the (Mitchell) landscape**			
	<30%	30-70%	71-90%	>90%
Very large	>500	>100	>50	>20
Large	201-500	51-100	21-50	11-20
Medium	101-200	21-50	11-20	1-10
Small	<100	<20	<10	<1

5.5 Glossary

Benchmark or benchmark value. Benchmarks or benchmark values are standards for vegetation condition in **vegetation communities** with relatively little evidence of recent or current alteration, disturbance or modification by humans. Benchmarks prescribe the range of variation in **condition** variables in such communities. Benchmarks are usually for **vegetation communities** at a level of classification between NVIS association and NVIS sub-formation, ie, at the approximate level of - Dominant growth form, cover, height and dominant species for each of the three strata (i.e. Upper, Mid and Ground), see table below. This is above the level of association used for **vegetation type** (levels defined in Executive Steering Committee for Australian Vegetation Information (2003). Australian Vegetation Attribute Manual Version 6.0. Department of Environment and Heritage, Canberra), see table below. **Condition** variables for individual **vegetation communities** are assessed against benchmark values for these communities.

The NVIS Information Hierarchy		
Hierarchical Level	Description	NVIS structural/floristic components required
I	Class*	Dominant growth form for the ecologically or structurally dominant stratum
II	Structural Formation*	Dominant growth form, cover and height for the ecologically or structurally dominant stratum.
III	Broad Floristic Formation**	Dominant growth form, cover, height and dominant land cover genus for the upper most or the ecologically or structurally dominant stratum.
IV	Sub-Formation**	Dominant growth form, cover, height and dominant genus for each of the three traditional strata. (i.e. Upper, Mid and Ground)
V	Association**	Dominant growth form, height, cover and species (3 species) for the three traditional strata. (i.e. Upper, Mid and Ground)
VI	Sub-	Dominant growth form, height, cover and species (5

	Association**	species) for all layers/sub-strata.
* Walker J. and Hopkins M.S (1990). Vegetation. In McDonald, R. C.; Isbell, R. F.; Speight, J. G.; Walker, J., and Hopkins, M. S. Australian Soil and Land Survey. Inkata Press, Melbourne. ** NVIS (defined for the NVIS Information Hierarchy)		

Condition. Quantitative measures or scores of structural and floristic condition of native vegetation in **vegetation zone(s)**. Condition measures are assessed against **benchmark values**.

Connectivity. Assessed as high, moderate, low, nil.

High - Native vegetation in good condition (ie, not **highly modified**) >100m wide that forms a sole link between other native vegetation in good condition
Moderate - **Highly modified native vegetation** >100m wide or native vegetation in good condition 50-100m wide that forms part of a sole link between other vegetation in good condition
Low - **Highly modified native vegetation** >100m wide or native vegetation in good condition >50m wide that is part of one of several links to other native vegetation in good condition
Nil - None of the above

Database. The data on Mitchell **landscapes, vegetation formations, vegetation types** and associated formulae contained in ***BioMetric***.

dbh. Stem diameter at breast height, ie, at 1.3 metres above the ground.

Landscape. Mitchell Landscape area as defined in Mitchell, P.B. (2002). NSW ecosystems study: background and methodology. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville; and in Mitchell, P.B. (2003). NSW ecosystems database mapping unit descriptions. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville.

Landscape value. Extent of fragmentation, connectivity and adjacency of native vegetation within 1000 hectare of the site being assessed.

Listed ecological community. Critically endangered, endangered or vulnerable ecological community listed under the *NSW Threatened Species Conservation Act 1995* or the Federal *Environment Protection and Conservation Act 1999.*

Listed threatened species. Critically endangered, endangered or vulnerable ecological species or population listed under the *NSW Threatened Species Conservation Act 1995* or the Federal *Environment Protection and Conservation Act 1999*.

Management actions. Actions that lead to increases (or occasionally decreases) in a **condition** score, leading to an increase (or occasionally a decrease) in site value. Gains in **biodiversity** to offset loss in **biodiversity** from clearing are partly derived from increases in **condition** predicted to occur with management actions. There are eight management actions in ***BioMetric*** - stock grazing exclusion, strategic stock grazing, planting or direct seeding of native vegetation, weed control, erosion control, feral herbivore control, retention of all dead timber, retention of all regrowth (regrowth as defined in the NSW Native Vegetation Act 2003).

Offset. M**anagement actions** on **site(s**) used for offsets. Gains in **biodiversity** from management actions on an offset site(s) may balance losses in **biodiversity** with clearing on another **site(s**).

Overcleared landscape. Mitchell **landscape** area in which more than 70% native vegetation cover has been cleared.

Overcleared vegetation type. **Vegetation type** of which more than 70% has been cleared by Catchment Management Authority area.

Plot. Area in which **condition** asessment is undertaken, usually 0.1 hectare or 0.04 hectare depending on the **condition** variable being measured.

Projective foliage cover. Projective foliage cover is equivalent to the amount of shadow that would be cast on the ground if there were a light source directly overhead.

Proposal. The **site**(s) and **management actions** proposed for assessment for clearing, thinning, offsets or overall.

Reference site. Sites used to collect **benchmark** information where the benchmarks are not already available for a vegetation type. Reference sites are with the same vegetation community and in the same region as the vegetation zone being assessed, containing vegetation in relatively unmodified condition. Values derived from the reference sites form the **benchmarks** for **condition** assessments. The reference sites should be measured as near in time and location to the **vegetation zones** being assessed for clearing (including **thinning** only), and **offsets** as possible. This allows seasonal variation in **condition** to be taken into account.

Regional value. Regional value (sometimes referred to as regional or conservation value) is the percentage of the original extent that a **vegetation type** has been cleared in the catchment. The greater the percentage of the original extent of a **vegetation type** that has been cleared the higher is its regional value.

Remnant area. Remnant area is assessed as very large, large, medium and small.

Level for total adjacent remnant area	% native vegetation cleared in the (Mitchell) **landscape** area			
	<30%	30-70%	71-90%	>90%
Very large	>500	>100	>50	>20
Large	201-500	51-100	21-50	11-20
Medium	101-200	21-50	11-20	1-10
Small	<100	<20	<10	<1

Riparian area. Area in riparian zone (plus buffer). Figures are riparian widths, ie, distances in metres from the top of the bank. *Note - These definitions are subject to change following review of the water quality assessment procedures.*

Location	Size of stream			
	Minor watercourses	Minor creeks, flood runners and lagoons	Minor rivers, wetlands and major creeks	Major rivers and important wetlands
Coast and tablelands	10 m	20 m	30 m	40 m
Western slopes	20 m	40 m	60 m	100 m
Western plains (other than WD)	20 m	40 m (+20 m)	60 m (+ 40 m)	100 m (+ 150 m)
Western Division	20 m	40m (+ 60m)	60 m (+ 140 m)	100 m (+ 400 m)
Estuarine areas	50 m from the astronomical high tide mark (where no obvious bank).			

Site. General term for clearing zone(s) and for offset zone(s). Also used in the context of **reference site**.

Stem density. Number of stems per hectare, measured in **plots** as number of stems per 0.1 hectare.

Site value. Quantitative measures or scores of structural and floristic condition of native vegetation in **vegetation zone(s)**, multiplied by zone area(s). Condition measures in site values are assessed against **benchmark values**.

Vegetation community. Vegetation community usually at the level of classification between NVIS association and NVIS sub-formation, ie, at the approximate level of - Dominant growth form, cover, height and dominant species for each of the three strata (i.e. Upper, Mid and Ground), see table below. This is above the level of association used for **vegetation type** (levels defined in Executive Steering Committee for Australian Vegetation Information (2003). Australian Vegetation Attribute Manual Version 6.0. Department of Environment and Heritage, Canberra), see table below. **Condition** variables for individual vegetation communities are assessed against **benchmark values** for **vegetation communities**.

The NVIS Information Hierarchy		
Hierarchical Level	Description	NVIS structural/floristic components required
I	Class*	Dominant growth form for the ecologically or structurally

		dominant stratum
II	Structural Formation*	Dominant growth form, cover and height for the ecologically or structurally dominant stratum.
III	Broad Floristic Formation**	Dominant growth form, cover, height and dominant land cover genus for the upper most or the ecologically or structurally dominant stratum.
IV	Sub-Formation**	Dominant growth form, cover, height and dominant genus for each of the three traditional strata. (i.e. Upper, Mid and Ground)
V	Association**	Dominant growth form, height, cover and species (3 species) for the three traditional strata. (i.e. Upper, Mid and Ground)
VI	Sub-Association**	Dominant growth form, height, cover and species (5 species) for all layers/sub-strata.
* Walker & Hopkins 1990 ** NVIS (defined for the NVIS Information Hierarchy)		

Vegetation type. Vegetation type in the catchment, generally at the classification level of association; classification level varies between catchments. Classification levels are defined in Executive Steering Committee for Australian Vegetation Information (2003). Australian Vegetation Attribute Manual Version 6.0. Department of Environment and Heritage, Canberra, see table above.

Vegetation formation. As defined in Keith, D. (2002). A compilation map of native vegetation for New South Wales. Version 1.1. A project undertaken for the NSW Biodiversity Strategy. NSW National Parks and Wildlife Service, Hurstville.

Vegetation zone. Relatively homogenous, discrete zone(s) into which site is divided for assessment according to **vegetation type** (for clearing and thinning) and broad condition (whether **highly modified** or not) (for clearing).

5.7 Improve or maintain test for threatened species

'Threatened Species' means threatened species, endangered ecological communities or endangered populations for the purpose of this methodology. Broadscale clearing of remnant native vegetation will improve or maintain environmental outcomes for threatened species if:

1. a) no threatened plant species are identified as occurring within the area to be cleared, and
   b) no threatened fauna species are identified or known or predicted to occur within the area to be cleared,

   or
2. any threatened species are identified, known or predicted to occur within the area to be cleared and the clearing is not likely to cause a loss to of any of these threatened species,

   or
3. any threatened species are identified, known or predicted to occur within the area to be cleared and the clearing causes a loss of any of these threatened species but the likely loss is offset by equivalent or greater gains for these threatened species from management actions contained (including offsets) in a Property Vegetation Plan.

5.8 Identify whether any threatened species occur or are predicted to occur

1. A threatened species is predicted to occur on the area proposed to be cleared if the:

(a) Threatened Species Profile Database indicates that the species is known or predicted to occur in the Catchment Management Authority Area Sub-region (See Appendix E) and is associated with any of the vegetation types within the area to be cleared; and
(b) area proposed to be cleared is within the specified geographic constraints for the species as defined in the Threatened Species Profile Database. For some species there is additional information that describes in more detail the geographical constraints on a species beyond vegetation type and sub-region. In certain circumstances this will enable the location of a threatened species to be more effectively predicted; and
(c) vegetation in the area to be cleared is:
    (i) not highly modified (defined as native woody vegetation having a mature overstorey projected foliage cover that is >25% of the projected foliage expected for that vegetation type in relatively unmodified state and has >50% of the perennial ground cover comprised of native plant species, or native grassland, wetland or herbfield with >25% perennial groundcover of native species) ; or
    (ii) the area is highly modified but the species can occupy highly modified vegetation as identified in the Threatened Species Database; and
(d) cover of vegetation remaining in the landscape is greater than the minimum amount for that species as identified the Threatened Species Profile Database. The landscape is defined as the area of land within a 1.75 kilometre radius of the centre of the area to be cleared; and
(e) vegetation in the area to be cleared is part of a patch of vegetation greater than the minimum patch size specified for that species as defined in the Threatened Species Profile Database; and
(f) vegetation in the area to be cleared contains either important breeding or foraging or shelter habitat features as defined in the Threatened Species Profile Database.

2. A visual inspection of the area proposed to be cleared must be undertaken prior to approving the PVP.

3. The visual inspection must:
    (a) determine whether there is any important breeding, foraging or shelter habitat for threatened fauna species occurring on the land where a threatened species is predicted to occur; and
    (b) specifically consider whether each threatened plant species that is predicted to occur is present; and
    (c) be undertaken in accordance with any requirements of the Threatened Species Profile Database relevant to each threatened plant species that is predicted to occur.

4. The Threatened Species Profile Database (Species Profiles) is a database held by the Department of Environment and Conservation and approved by the Minister for Environment, which includes the following:
    a. a list of threatened species known or predicted to be present in each Catchment Management Authority Area and Catchment Management Authority Area Sub-region
    b. for each threatened species:
        i. a description and, where available, a series of photographs;
        ii. a description of its distribution in NSW;
        iii. habitat and ecology;
        iv. threats;
        v. management action and the predicted response (expressed as percentage improvement in population or site carrying capacity) that each management action is likely to have on each threatened species. Differing levels of response may be provided for “highly modified” condition or “not highly modified” vegetation;

vi. vegetation types with which each threatened species is associated;
vii. geographical constraints to the presence of the species;
viii. landscape requirements, minimum patch size, important breeding, foraging and shelter habitat features;
ix. the time of year when the species is identifiable (used to identify appropriate time for inspection of plants);
x. the species' ability to sustain a temporary reduction in local population or temporary loss of habitat; and
xi. the species' ability to occupy vegetation in 'highly modified' condition.

c. prior to any changes being made to the Threatened Species Profile Database the Minister for the Environment will consult with the Minister for Natural Resources.

5.9 Loss of threatened species, habitat or key habitat features

The key habitat features are those features that are important for some threatened species. They could include breeding, foraging or shelter habitat features. Where it is appropriate to use key habitat features as a measure of gain or loss then this is described in the Threatened Species Profile Database.

If the proposal will result in loss of individuals of the species, or the area of its habitat or key habitat features an offset will be needed in order for the clearing to improve or maintain environmental outcomes for threatened species.

The expected loss of threatened species, or their habitat or their key habitat features is to be determined in accordance with the following process:

1. determine the unit of measure of this loss (eg. individuals of a threatened species measured by number of individuals, area of habitat measured by hectares or key habitat features measured by number of each feature such as number of hollow-bearing trees). This unit of measure must also be used for assessing any offset required for that species;
2. estimate the expected loss for each species known or predicted to be present in each vegetation zone,
3. if there is more than one vegetation zone within the area proposed to be cleared then the total loss for each species is calculated by adding the losses in each vegetation zone:

5.10 Can any likely loss be offset?

Offsets can only be used where the local population of a species can sustain a temporary loss of individuals of the species, their habitat or their key habitat features while the offset takes effect as indicated in the Threaten Species Profile Database.

Note: For the purposes of offsets a local population is defined as the total population of the threatened species on the property or properties subject of the PVP on which the clearing is proposed.

A loss of individuals of the species, or its habitat or its key habitat features can only be offset by a corresponding gain in-individuals of the species, or its habitat or its key habitat features. The Property Vegetation Plan must include management actions in appropriate offset area(s) that will achieve the offset.

The Threatened Species Profile Database identifies the management actions that can be undertaken to provide gains for threatened species. This includes an estimate of the percentage increase in population that can be expected in response to each management action, as measured by either number of individuals, or habitat area or key habitat feature.

An offset area must:

1. support the same or a similar vegetation type to that being cleared - the offset cannot be used as an offset for that species if it does not contain a vegetation type that is known to be used by the subject species (as recorded in the Threatened Species Profile Database); or
2. contain key habitat features that would support the threatened species; or
3. be occupied by the threatened plants as confirmed by site inspection.

The assessment must calculate the population(s), area of habitat or amount of key habitat feature that each offset area contains for each affected threatened species.

The gain for each species is determined by the following formula:

$$\textbf{Gain}^{\textbf{Action1}} \textbf{ = Expected increase x Amount}$$

Where:

- Gain is the increase in the population of threatened species;
- Expected increase is the offset ratio or the percentage increase in population or carrying capacity expected in response to management action, as detailed in the Threatened Species Profile Database;
- Amount is the number of individuals or area of habitat or number of the key habitat feature that are contained within the proposed offset;
- The value of actions is additive so that total gain achieved is the sum of gains for each action.

If there is more than one vegetation zone within area proposed to be cleared then the total gain for each species is calculated by adding the gains in each vegetation zone:

If total gain for each threatened species identified, known or predicted to occur in the area proposed to be cleared is equal to or greater than the total loss then the proposal maintains or improves environmental outcomes for threatened species.

If there is a total loss for any species identified, known or predicted to occur in the area proposed to be cleared and the loss is greater than the total gain then the proposal does not maintain or improve environmental outcomes for threatened species.

Note: References

Executive Steering Committee for Australian Vegetation Information (2003). Australian Vegetation Attribute Manual Version 6.0. Department of Environment and Heritage, Canberra;

Keith, D. (2002). A compilation map of native vegetation for New South Wales. Version 1.1. A project undertaken for the NSW Biodiversity Strategy. NSW National Parks and Wildlife Service, Hurstville;

Mitchell, P.B. (2002). NSW ecosystems study: background and methodology. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville;

Mitchell, P.B. (2003). NSW ecosystems database mapping unit descriptions. Unpublished report to the NSW National Parks and Wildlife Service, Hurstville;

Vegetation type is identified in accordance with the list published by Department Environment and Conservation at:
http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Threatened+Species+Search
http://www.deh.gov.au/biodiversity/threatened/communities/index.html.

6. Land Degradation (Soils) Assessment

6.1 Introduction

The following land degradation hazards are assessed:

- sensitive terrain (may be called 'critical terrain units' in latest version of the Developer)
- water erosion
- wind erosion
- earth mass movement (may be called 'mass movement' in latest version of the Developer)
- acid sulfate soils
- salinity
- shallow soils and rockiness (may be 'rockiness and shallow soils' in latest version of the Developer)
- soil structure (may be called 'soil structure decline' in latest version of the Developer).

Whether a proposal is considered to improve or maintain environmental outcomes is determined by the class any associated hazards fall within:

- classes 1 & 2: the proposal is regarded as improving or maintaining environmental outcomes;
- classes 3 to 6: will not improve or maintain environmental outcomes unless the on-site management actions specified in Appendix F[1] or Appendix G[2] for each applicable hazard and class are undertaken;
- classes 7 & 8: will not improve or maintain environmental outcomes and the impacts cannot be offset by management actions.

The process for assessing clearing and offset proposals in respect of land degradation is the same, except where otherwise stated.

Biodiversity, salinity and water quality offset proposals ***that involve soil disturbance*** are also assessed by the LSC Tool in order to determine whether the offsets will improve or maintain environmental outcomes in relation to land degradation.

Where a proposal has several hazards the decision as to whether clearing or offset proposals will improve or maintain environmental outcomes is based on the most significant land degradation risk arising from the proposal, ie the hazard with the highest class.

6.2 The 'improve or maintain' test for land degradation

There are 4 preliminary steps in the LSC Tool:

- identify the LSC zone
- identify the relevant catchment area
- enter slope data
- enter rainfall data

6.2.1: Identify LSC Zone

The LSC Tool must be run separately for each LSC zone. LSC zones are areas of land that have relatively uniform physical characteristics in relation to slope, rockiness, soil type, soil

[1] In relation to assessment of clearing proposals.

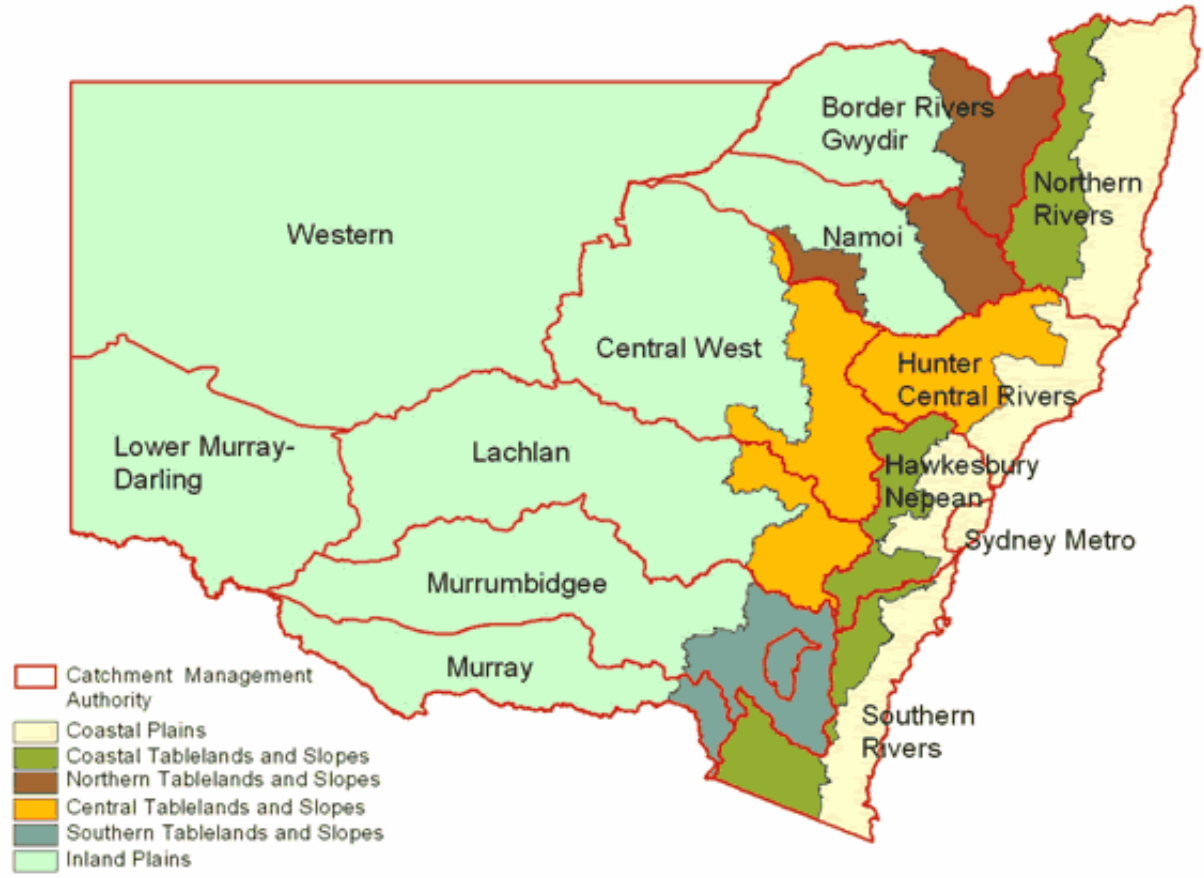
[2] In relation to assessment of offsets.

drainage, landform or salt outbreak. LSC zones are identified visually and by using air photos, topographic and soil maps. They are mapped using the PVP Mapper. The proposal must improve or maintain environmental outcomes for all LSC zones it includes in order to pass the 'improve or maintain' test.

6.2.2: Identify the relevant Catchment Area

To allow areas with similar characteristics to be assessed consistently, Catchment Management Authority areas have been divided into Catchment Areas based on common climatic, soil and geomorphic characteristics. These Catchment Areas are shown in Figure 6.1.

Figure 6.1: Map of Catchment Areas



In some catchment areas certain hazards are not significant and are not assessed. For example, acid sulfate soils are only assessed for coastal plains. The hazards assessed for each area are shown in Table 6.1.

Table 6.1: Required Hazard Assessment by Catchment Areas

	What Hazards are assessed?								
Catchment Areas	Critical terrain unit	Water erosion hazard	Wind erosion hazard	Salinity hazard	Rockiness & shallow soil hazard	Earth mass movement hazard	Soil structure hazard	Invasive scrub hazard	Acid sulfate soil hazard
Coastal Tableland and Slopes	✓	✓		✓	✓	✓			
Northern Tableland and Slopes	✓	✓	✓	✓	✓	✓			

Central Tableland and Slopes	✓	✓	✓	✓	✓	✓			
Southern Tablelands and Slopes	✓	✓	✓	✓	✓	✓			
Coastal Plains excluding Hawkesbury/Nepean	✓	✓	✓		✓	✓			✓
Coastal Plains - Hawkesbury/Nepean only	✓	✓	✓	✓	✓	✓			✓
Inland Plains	✓	✓	✓	✓	✓		✓	✓	

6.2.3: Enter Slope Data

Slope data is used to assess water erosion hazard and mass movement hazard.

Average slope may be either:

- estimated visually in the field by experienced landscape assessors;
- measured using an Abney level or clinometer; or
- estimated from a topographic map or Digital Elevation Model.

The slope classes available as options in the LSC Tool vary between different Catchment Areas to reflect local conditions and the specific criteria required for hazard assessments.

6.2.4: Enter Rainfall data

Rainfall data is one factor used to assess water erosion hazard, wind erosion hazard, soil structure decline and mass movement hazard.

Average annual rainfall requires the selection of the appropriate 100mm class using information provided by the Australian Bureau of Meteorology. This must relate to the locality if this is available, or, where this is not available, to a nearby town with a similar climate.

6.3 Assessing specific land degradation hazards

6.3.1 Clearing on sensitive terrain

- Sensitive terrain are areas of the landscape that are very susceptible to environmental harm arising from clearing of native vegetation. They are defined in Table 6.2.
- Clearing of native vegetation on sensitive terrain located in a Catchment Area ticked in Table 6.3 is regarded by the LSC Tool as not improving or maintaining environmental outcomes.
- It is not possible to offset the impacts of the clearing of sensitive terrain.
- Note: sensitive terrain is not assessed in respect of proposals for biodiversity or salinity offsets.

Table 6.2: Definitions of Sensitive Terrain used in the LSC Tool.

Sensitive Terrain	Definition
Foredune to beach	Elongated, moderately inclined to very steep, single or compound

	ridge generally less than 15 metres high, built up by the wind from predominantly sand sized particles derived from an adjacent coastal beach.
Derelict mine site	Surface workings of former mining sites, whether remediated or unremediated, which may contain toxic soil, rock or spoil materials.
High run-on area	Areas of the inland plains that have large up-slope catchments and are subject to very high run-on volumes in times of rainfall.
Lakebed within 200m of shoreline	Beds of ephemeral or fluctuating lakes, whether fresh or saline, of the inland plains. The near-shore areas of these lakebeds are often susceptible to wind erosion and environmental degradation.
Lunette	Occurs mainly in the inland plains and is an elongated, gently recurved, low ridge consisting of sand or pelletised silt and clay which has been built up by wind action on the north eastern or eastern margin of a ephemeral freshwater or saline lake or closed depression. A lunette typically has a wave-modified slope towards the lake or depression.
Sand Dune	Occurs mainly in the inland plains and coastal plains and is a moderately inclined to very steep, sub-parallel linear ridge or hillock built up from sand sized particles by wind action.

Table 6.3: Applicability of Sensitive Terrain in Catchment Areas. (Ticked cell indicates hazard is assessed in the Catchment Area.)

	Sensitive Terrain					
Catchment Area	**Foredune to Beach**	**Derelict Mine Site**	**High Run-on Area**	**Lakebed**	**Lunette**	**Sand Dune**
Northern Tablelands and Slopes		✓				
Central Tablelands and Slopes		✓				
Southern Tablelands and Slopes		✓				
Coastal Tablelands and Slopes		✓				
Coastal Plains	✓	✓				✓
Inland Plains		✓	✓	✓	✓	✓

6.3.2 Assessing Water Erosion Hazard

- Water erosion hazard is the susceptibility of land to soil erosion by moving water.
- Rainfall erosivity and water availability for plant growth are factors that affect soil erosion. These vary significantly between different parts of the State. The LSC Tool uses different classes in different Catchment Areas to account for differences in these factors. These are set out in Table 6.4.
- The severity of existing water erosion is classed by the LSC Tool as either: nil, low, moderate, high, very high, or extreme, according to the definitions of these categories contained in Table 6.5.
- If the existing erosion is classed as **nil, low or moderate**, the LSC Tool assigns the LSC class indicated in Table 6.4 (based on slope).
- LSC classes 4 and 5 are not differentiated from each other by slope, but by whether the soils are fertile (class 4) or of low fertility (class 5).
- If the existing erosion is classed as **high**, the LSC Tool automatically assigns water erosion hazard to LSC class 6.
- If the existing erosion is classed as **very high**, the LSC Tool automatically assigns water erosion hazard to LSC class 7.
- If the existing erosion is classed as **extreme**, the LSC Tool automatically assigns water erosion hazard to LSC class 8.

Table 6.4: Slope Class (%) for each LSC Class used to determine Water Erosion Hazard in the Catchment Areas.

	LSC Class determined by slope (%)					
Catchment Area	**I**	**2**	**3**	**4 & 5**	**6**	**7 & 8**
Northern Tablelands and Slopes	**< 1**	**1 – <2**	**2 - <8**	**8 - <25**	**25 - 33**	**> 33**
Inland Plains	**< 1**	**1 - <3**	**3 – <10**	**10 - <25**	**25 - 33**	**> 33**
Central Tablelands and Slopes	**< 1**	**1 – <2**	**2 - <8**	**8 - <25**	**25 - 33**	**> 33**
Southern Tablelands and Slopes	**<1.5**	**1.5 - <5**	**5 – <12**	**12 - <25**	**25 - 33**	**> 33**
Coastal Tablelands and Slopes	**< 1**	**1 – <2**	**2 - <8**	**8 - <25**	**25 - 33**	**> 33**
Coastal Plains	**< 1**	**1 - <2**	**2 - <8**	**8 - 25**	**25 - 33**	**> 33**

Table 6.5: Definitions of Existing Erosion Classes

Class	Definition
Nil	No sheet or gully erosion present.
Low	Minor sheet and gully erosion present.
Moderate	Moderate sheet and gully erosion present – gullies restricted to major flow lines.
High	Severe sheet and gully erosion present – rills clearly evident, subsoil and C horizons clearly exposed in many areas, clearly evident depositional areas adjacent to fences and roads - gullies are deep and active in 2nd order streams showing branching into lower parts of 1st order flow lines.
Very high	Severe sheet erosion present causing bare ground and scalding – subsoil and C horizons or bare rock exposed in many areas - clearly evident areas of deposition on lower slopes, adjacent to fences and roads - gullies are active and strongly branched, extending high into 1st order flow lines – gullies often show tunnelling.
Extreme	Majority of the area is bare and scalded, usually extensive areas of active rilling and gullying present – gullies may occupy the majority of the area.

6.3.3 Assessing wind erosion hazard

- Wind erosion hazard is the susceptibility of land to the erosion of soil particles by wind.
- Soil erosion by wind is of particular concern in coastal regions and inland dryland farming areas.
- The criteria used by the LSC Tool to assess wind erosion hazard are:
  - wind erodibility of soil;
  - wind erosive power as indicated on a map in the LSC Tool;
  - average annual rainfall.
- The relationship between the criteria in determining the class is shown in Table 6.6.
- Wind erodibility of soil is assessed in the following classes:
  - Low: loams, clay loams, or clays (all with greater than 13% clay);
  - Moderate: fine sandy loams or sandy loams (all with 6 – 13% clay);
  - High: loam sands or loose sands (all with less than 6% clay).

Table 6.6: Relationship between Wind Erodibility Class of Soil, Wind Erosive Power and Annual Rainfall for LSC Classes.

Average Annual Rainfall	Wind Erodibility Class of Soil	Wind Erosive Power	LSC Class
> 500 mm	low	low	1
		moderate	2
		high	2
	moderate	low	2
		moderate	2
		high	3
	high	low	2
		moderate	4
		high	8
300 – 500 mm	low	low	3
		moderate	4
		high	4
	moderate	low	4
		moderate	4
		high	4
	high	low	4
		moderate	5
		high	8
200 – <300 mm	low	low	6
		moderate	6
		high	6
	moderate	low	6
		moderate	6
		high	6
	high	low	6
		moderate	7
		high	8
< 200 mm	low	low	8
		moderate	8
		high	8
	moderate	low	8
		moderate	8
		high	8
	high	low	8
		moderate	8
		high	8

6.3.4 Assessing salinity hazard

- The LSC Tool provides a preliminary assessment of clearing and offset proposals to check whether they are likely to improve or maintain environmental outcomes for dryland salinity.
- If the preliminary assessment shows that salinity is an issue, and the site is in an area of the State covered by the Salinity Benefits Index Tool this will be run to give a more detailed assessment.
- The Salinity Benefits Index Tool currently does not cover the Northern Rivers CMA, some parts of the Hunter and Central Rivers CMA, the Southern Rivers CMA, the Sydney Metropolitan CMA, or the Western or Lower Murray/Darling CMAs (see Figure 6.2 in Section 6.5).
- In areas covered by the Salinity Benefits Index Tool, if salinity hazard assessment by the LSC Tool results in class 3 – 6 in the case of a clearing proposal, or class 3 – 8 in the case of an offset proposal, the Salinity Benefits Index Tool must be run to more accurately determine the salinity hazard.
- In areas not covered by the Salinity Benefits Index Tool, the outcome of running the LSC Tool will be either that a proposal will improve or maintain environmental outcomes, or that it will not.
- The criteria used by the LSC Tool to assess salinity hazard are:
  - evidence of salinity outbreaks in the LSC zone
  - evidence of salinity outbreaks down-slope from the LSC zone
  - whether the LSC zone is in a known severe dryland salinity hazard area
- The relationship between the criteria in determining the Class is shown in Tables 6.7 and 6.8.

Table 6.7: Relationship between Evidence of Salinity Outbreaks and Knowledge of Dryland Salinity Hazard for those LSC Zones where the Salinity Benefits Index Tool is available.

Evidence of salinity outbreaks in the LSC zone	Evidence of salinity outbreaks downslope from the LSC zone	Known severe dryland salinity hazard zone?	LSC Class
No salt outbreaks	No salt outbreaks	No	1 or 2
		Insufficient information on salinity hazard – further investigation required	Unknown– LUOS salinity tool required
		Yes	7 or 8
	Salt outbreaks observed but not extensive and no severe scalding	Insufficient information on salinity hazard – further investigation required	Unknown - clear indications of salinity hazard – LUOS salinity tool required
		Yes	7 or 8
	Salt outbreaks extensive and severe scalding	Yes	7 or 8
Salt outbreaks observed but not extensive and no severe scalding	No salt outbreaks	Insufficient information on salinity hazard – further investigation required	Unknown - clear indications of salinity hazard – LUOS salinity tool required
		yes	7 or 8
	Salt outbreaks observed but not extensive and no severe scalding	Insufficient information on salinity hazard – further investigation required	Unknown - clear indications of salinity hazard – LUOS salinity tool required
		Yes	7 or 8

	Salt outbreaks extensive and severe scalding	Not required	7 or 8
Salt outbreaks extensive and severe scalding	Not required	Not required	7 or 8

Table 6.8: Relationship between Evidence of Salinity Outbreaks and Knowledge of Dryland Salinity Hazard for those LSC Zones where the Salinity Benefits Index Tool is not available.

Evidence of salinity outbreaks in the LSC zone	Evidence of salinity outbreaks downslope from the LSC zone	Known severe dryland salinity hazard zone?	LSC Class
No salt outbreaks	No salt outbreaks	No	1 or 2
		Yes	7 or 8
		Yes	7 or 8
	Salt outbreaks and/or scalding	No	7 or 8
Salt outbreaks and/or scalding	No salt outbreaks		7 or 8

6.3.5 Assessing shallow soils and rockiness hazard

- Shallow soils and rockiness reduce the land use capability of soils and land.
- The criteria used by the LSC Tool to assess shallow soil and rockiness hazard are:
  - estimated percentage exposure of rocky outcrops;
  - average soil depth; and
  - average annual rainfall
- The relationship between the criteria in determining the LSC Class is shown in Table 6.9.

Table 6.9: Relationship between Rocky Outcrop, Soil Depth and Average Annual Rainfall for Assessment of Shallow Soils and Rockiness.

Soil Depth cm	Rocky Outcrop % Coverage	LSC Class if <500mm Av. Annual Rainfall	LSC Class if >500mm Av. Annual Rainfall
>100	<30	1, 2	1, 2
50 – 100		4	1, 2
25 – <50		7, 8	4
<25		7, 8	7, 8
>100	30 - 50	4, 5	4, 5
50 – 100		4, 5	4, 5
25 – <50		7, 8	4, 5
<25		7, 8	7, 8
>100	50 – 70	6	6
50 – 100		6	6
25 – <50		7, 8	6
<25		7, 8	7, 8
>100	>70	7, 8	7, 8
50 – 100		7, 8	7, 8
25 – <50		7, 8	7, 8
<25		7, 8	7, 8

6.3.6 Assessing earth mass movement hazard

- The criteria used by the LSC Tool to assess earth mass movement hazard are:
  - existing evidence of earth mass movement
  - slope class
  - average annual rainfall
  - soil saturation conditions
  - nature of underlying soil materials
- The relationship between the criteria in determining the LSC Class is shown in Table 6.10.

Table 6.10: Relationship between Existing Earth Mass Movement, Slope, Average Annual Rainfall, Subsurface Soil Saturation Conditions and Unconsolidated Substrates for Assessing Earth Mass Movement Hazard.

Is there existing earth mass movement?	Slope of the LSC zone	Is the average annual rainfall > 900 mm?	Concentration or impedance of seepage flows?	Is the underlying material unconsolidated?	LSC Class
yes	<12%	not required	not required	not required	1
	12% or more	not required	not required	not required	8
no	< 12 %	not required	not required	not required	1
	12 – 25%	yes	yes	yes	7
				no	6
			no	yes	6
				no	3
		no	yes	yes	6
				no	3
			no	yes	3
				no	1
	> 25%	yes	yes	yes	8
				no	7
			no	yes	7
				no	6
		no	yes	yes	6
				no	6
			no	yes	6
				no	3

6.3.7 Assessing acid sulfate soils hazard

- The LSC Tool assesses acid sulfate soils hazard for Coastal Plains in the Northern Rivers CMA, the Southern Rivers CMA, the Hawkesbury Nepean CMA and the coastal subdivision of the Hunter and Central Rivers CMA.
- The criteria used by the LSC Tool to assess acid sulfate soils hazard are:
  - land elevation in metres above Australian Height Datum (AHD);
  - depth to potential or actual ASS;
- The depth to acid sulfate soils is estimated from Department of Infrastructure, Planning and Natural Resources Acid Sulfate Soil maps, or can be obtained through field testing in the relevant LSC zone.
- The relationship between the criteria in determining the Class is shown in Table 6.11.

Table 6.11: Relationship between Criteria Determining Class for Acid Sulfate Soils Hazard.

Is land >10m AHD?	Depth to Acid Sulphate Soils Hazard	LSC Class
Yes	NA	1
No	ASS not present	1
	>4m	3
	2 – 4m	4
	1 – <2m	5
	<1m	8

6.3.8 Assessing soil structure decline hazard

- Soil structure decline is only assessed by the LSC Tool for the inland plains of NSW and only if average annual rainfall is <600mm.
- The criterion used by the LSC Tool to assess soil structure decline hazard is the nature of surface soils.
- Table 6.12 shows how the Class is determined.

Table 6.12: Relationship between Nature of Surface Soils and Classes for the Assessment of Soil Structural Decline Hazard in the Inland Plains of NSW (where annual rainfall <600mm).

Nature of surface soils	Class
self-mulching clay surface soils; loose sands	1, 2
fine sandy loam and sandy loam surface soils	3
loam and clay loam surface soils, non sodic	3
mildly sodic, loam, clay loam and clay surface soils	4
sodic, light clay and medium clay surface soils	5, 6
strongly sodic, light clay and medium clay surface soils	7, 8

Note: References

Gunn, R.H., Beattie, J.A., Reid, R.E. and van de Graaff, R.H.M. (Eds) 1988. *Australian Soil and Land Survey Handbook: Guidelines for Conducting Surveys*. Inkata Press, Melbourne.

McKenzie, N.J., Coughlan, K.J. and Cresswell, H.P. (Eds) 2002. *Soil Physical Measurement and Interpretation for Land Evaluation*. Australian Soil and Land Survey Handbook Series, Vol 5. CSIRO Publishing, Collingwood.

Charman, P.E.V. and Murphy, B.W. 2000. *Soils: Their Properties and Management.* Second Edition. Oxford University Press, Melbourne and NSW Department of Land and Water Conservation, Sydney.

Emery, K. 1985. *Rural Land Capability*. Soil Conservation Service of NSW.

Hannam, I.D. and Hicks, R.W. 1980. 'Soil conservation and land use planning', *Journal of Soil Conservation, NSW 36***:** 135-145.

Klingebiel, A.A. and Montgomery, P.H. 1961. *Land Capability Classification, Agriculture Handbook No. 210*. Soil Conservation Service, U.S. Department of Agriculture, Washington, DC.

Lee, L.K. and Goebel, J. 1984. *The Use of the Land Capability Classification System to Define Erosion Potential on Cropland*. A & P Staff Report No. 85-1. Soil Conservation Service, Washington, DC.

Leys, J.F., Craven, P., Murphy, S., Clark, P. and Anderson, R. 1994. 'Integrated resource management of the Mallee of South-Western New South Wales'. *Australian Journal of Soil and* Water Conservation, 7(3), 10-19.

Peverill, K.I. 1999. *Soil Analysis: An Interpretation Manual*. CSIRO Publishing, Canberra.

.

APPENDICES

Appendix A Prescribed New South Wales watercourses for determining riparian buffer strip widths in PVP Developer

Introduction

The purpose of these listings of stream names is to assist CMA officers and stakeholders when assessing requirements for default riparian buffer distances when negotiating a PVP. The listings are organised by CMA in the following order:

1. Border Rivers/Gwydir
2. Namoi
3. Central West
4. Lachlan
5. Murrumbidgee
6. Murray
7. Western
8. Lower Murray-Darling
9. Northern Rivers
10. Hunter/Central Rivers
11. Hawkesbury-Nepean
12. Sydney Metro
13. Southern Rivers

The listings for each CMA are divided into sub-groupings of major rivers and their tributaries and effluents. An alphabetical sequence is used in each sub-group. Major rivers are listed in a separate table on the next page.

Where major rivers flow through more than one CMA area, the split up of the listed tributaries and effluents has yet to be confirmed with the relevant DIPNR regions. This applies only in the inland rivers, specifically:

- Tributaries and effluents of the Barwon R are largely in Western CMA but some are also in Border Rivers/Gwydir CMA. The master list for the Barwon is currently included under Western CMA and the listing for Border Rivers/Gwydir CMA cross references to it.
- Tributaries and effluents of the Darling R are largely in Western CMA but some are also in Lower Murray-Darling CMA. The master list for the Darling is currently included under Western CMA and the listing for Lower Murray-Darling CMA cross references to it.
- Tributaries and effluents of the Murray R are largely in Murray CMA but some are also in Lower Murray-Darling CMA. The master list for the Murray is currently included under Murray CMA and the listing for Lower Murray-Darling CMA cross references to it.
- Tributaries and effluents of the Bogan R are largely in Central West CMA but some are also in Western CMA. The master list for the Bogan is currently included under Central West CMA and the listing for Western CMA cross references to it.

The names used are those approved by the Geographical Names Board or shown on topographic maps or the cadastral (county and parish) maps published by the New South Wales Government.

Major Rivers

Inland Rivers	Coastal Rivers
BARWON RIVER from the confluence of the Macintyre River and Weir River (Qld) near Mungindi and extending to its confluence with the Culgoa River	BELLINGER RIVER (NORTH ARM and SOUTH ARM BELLINGEN RIVER)
	CLARENCE RIVER
DUMARESQ RIVER from the confluence of the Dumaresq or Severn River (Qld) and Tenterfield Creek and extending to its confluence with Macintyre River	HASTINGS RIVER (Hastings River and Mooraback Creek)
MACINTYRE RIVER from its source near Glencoe to its confluence with the Weir River (Qld) near Mungindi	MACLEAY RIVER (Macleay River and Muddy River)
DARLING RIVER from its confluence with the Culgoa River to its junction with the Murray River	NAMBUCCA RIVER
	RICHMOND RIVER
GWYDIR RIVER (GWYDIR RIVER, GOONAL BRANCH of GWYDIR RIVER [Part], BIG LEATHER WATERCOURSE [Part], BALLONE CREEK [Part], BUNDARRA or GWYDIR RIVER)	TWEED RIVER (TWEED RIVER and SOUTH ARM OF TWEED RIVER)
	HUNTER RIVER
	KARUAH RIVER
NAMOI RIVER from its source to its junction with the Barwon River at Walgett	MANNING RIVER
BOGAN RIVER from its source to its junction with the Barwon River	HAWKESBURY RIVER
CASTLEREAGH RIVER from its source to its junction with the Macquarie River	GEORGES RIVER
MACQUARIE OR WAMMERAWA RIVER from its source to its junction with the Barwon River	BEGA RIVER
	CLYDE RIVER
LACHLAN RIVER from its source to its junction with the Murrumbidgee River	MORUYA RIVER (Deua or Moruya River)
MURRUMBIDGEE RIVER from its source to its junction with the Murray River	SHOALHAVEN RIVER
MURRAY RIVER from its source to the South Australian border	SNOWY RIVER
	TOWAMBA RIVER
	TUROSS RIVER (Tuross River and Dolondundale or Tools Creek)

BORDER RIVERS/GWYDIR

BARWON RIVER from the confluence of the Macintyre River and Weir River (Qld) near Mungindi and extending to its confluence with the Culgoa River, together with tributaries and effluents of the Barwon River included in the listing for the Western CMA that lie partly or wholly within the area of the Border Rivers/ Gwydir CMA.:

DUMARESQ RIVER and the following tributaries and effluents of Dumaresq River from the confluence of the Dumaresq or Severn River (Qld) and Tenterfield Creek and extending to its confluence with Macintyre River:

Bald Rock Creek	Campbells Creek	Glen or Robertsons	Rocky Creek
Bark Hut Creek	Camp Creek	Creek	Silent Grove Creek
Beardy River	Carpet Snake Creek	Highland Home Creek	Spring Creek
Black Creek	Catarrh Creek	Little Oakey Creek	Sugarloaf Creek
Black Swamp Creek	Deepwater Creek	Mole River	Swamp Oak Creek
Bluff River	Deepwater River	Morah Creek	Tenterfield Creek
Bow Creek	Gipsies Creek	Oakey Creek	Vegetable Creek
		Pyes Creek	Washpool Creek

GWYDIR RIVER (GWYDIR RIVER, GOONAL BRANCH of GWYDIR RIVER [Part], BIG LEATHER WATERCOURSE [Part], BALLONE CREEK [Part], BUNDARRA or GWYDIR RIVER) and the following tributaries and effluents of the Gwydir River from its source to its junction with the Barwon River:

Abington Creek Auburn Vale Creek Flat Bottom or Gournama Creek Bakers Creek Ballala Creek. Ballin Boona Creek Basin Creek Big Leather Watercourse Boomi River Boorolong Creek Bora Creek-tributary of Gwydir River upstream from Keera Crossing Borah Creek-tributary of Gwydir River up stream from Bingara Browns Creek Cachs Creek (Five Mile Creek) Capel Creek (Oakey Creek-tributary of Macintyre Creek) Carole Creek (Carore Creek and Medgun Creek) Chippenham Creek Camerons Creek	Cobbadah Creek Copes Creek Courallie Creek Georges Creek Goonal Creek (Goonal Branch of Gwydir River [Part]) Gouron Gouron Creek Gwydir Ana Branch (Great Ana Branch of Gwydir River [Part]) Gwydir Pool (Great Ana Branch of Gwydir River [Part]) Gurley Creek Hallams Creek Halls Creek-tributary of Gwydir River down stream from Moree Halls Creek-(Bingara or Halls Creek)-tributaryof Gwydir River atBingara Hobbs Gully Honeysuckle Creek Horton River Keera Creek (Reedy Creek) Creek-tributary of Middle Kellys Gully	Kentucky Creek (Kentucky Ponds) Laura Creek (Sandy Creek-tributary of Laura Creek) Limestone Creek Louisa Creek Macintyre Creek Mallowa Creek Mehi River (Meei or Gwydir River) Mia Mia Creek Middle Creek Molong Creek (South Molong Creek) Moomin Creek Moredun Creek (Moredun, Clerks or Kellys Creek) Morse Creek Mosquito Creek Myall Creek Noogera Creek Oaky Creek-tributary of the Gwydir River downstream from the junction of the Gwydir and Horton Rivers Pallal Creek Plains Creek	Ponds Creek (The Ponds Creek) Rocky Creek Rocky River Roumalla Creek Sandy Creek-tributary of Myall Creek Sheep Station Creek-tributary of Gwydir River Sheep Station Creek-tributary of Myall Creek Stony Batter Creek (Stonybatter Creek) Swamp Oak Creek Tarran Creek Teatree Gully (Tea Tree Gully) Terry Hie Hie Creek Turrawarra Creek Tyreel Creek Warialda or Reedy Creek Weah Waa Creek Winter Station Creek Wolongimba Creek

MACINTYRE RIVER and the following tributaries and effluents of this river from its source near Glencoe to its confluence with the Weir River (Qld) near Mungindi:

Apple Tree Gully Arrawatta Creek Back Plain Creek Bannockburn Creek Black Gully Cam Creek Camerons Creek Cunningham's or Jardines Creek Ena Back Creek Ena Creek	Frazers Creek Frazers or Swamp Oak Creek Furracabad Creek Geary Creek Gnoura Gnoura Creek Goroo Lagoon Gum Hut Creek Kings Plains Creek Long Plain Gully Meriti Creek	Middle Creek Morella Watercourse Myall Creek Newstead or Kings Creek Nine Mile Creek Ottleys Creek Paradise Creek Pindari Creek Querra Creek Robroy Gully	Severn River Stonehenge Creek Swan Brook The Beardy Waters Wean Creek Wellingrove Creek Whalan Creek Wyndhams Creek

NAMOI

NAMOI RIVER and the following tributaries and effluents of the Namoi River from its source to its junction with the Barwon River at Walgett.

Attunga Creek Baly Creek Baradine Creek (Baradine or Milchomi or Bungle Gully Creek and Baradine or Spring or Yearinan Creek [Part] and Dandry Creek[Part]) Barraba Creek Big Jacks Creek Black Mountain Creek Bobbiwa Creek Bohena Creek (Bohena or Brigalow Creek) Bomera Creek Borah Creek-tributary of Manilla River Borah Creek-tributary of Yaminba Creek Borambil Creek Brigalow Creek (tributary of Namoi River downstream from Sheepstation Lagoon) Bugaldie Creek Bullawa Creek Bundulla Creek Carbeen Creek Carlisles Gully Cauborn Creek Chilcotts Creek Cobrabald River (Cobrabald Creek) Cockburn River Coghill Creek (Coghill or Sandy Creek) Cowallah Creek Collis or Bungle Gully Warrambool Creek – effluent of Baradine Creek Colly Creek (Turrabeile, Coxs or Bone Creek)	Collygrach Creek Connors Creek Coormore Creek Coxs Creek Coomoo Coomoo Creek Crow Mountain Creek Cubbaroo Warrambool Currabubula Creek Cuttle Creek Dandry Creek Doughboy Hollow Creek (Doughboy Creek) Driggle Driggle Creek Drildool Warrambool Dubbo Creek (Etoo or Dubbo Creek) Duncans Creek Dungowan Creek Dunnadie Creek (Wearne Creek) Etoo Creek (Part) (Etoo or Dubbo Creek) Eulah Creek (Bulah Creek) Eumur Creek Fracers Creek Garrawilla Creek (Girrawillie Creek) Gil Gil Creek Goona Creek Goonbri Creek Goonoo Goonoo Creek Greenhatch Creek Gunidgera Creek Halla Linga Creek Halls Creek (Cuerindi or Halls Creek) Hawkins Creek Horsearm Creek (Horse Arm Creek) Ingleba Creek Ironbark Creek Jacks Creek Jacob and Joseph Creek Jamiesons Creek Kerringle Creek (Gullingall Creek) Little Jacks Creek	MacDonald River (Muluerindi or MacDonald River) MacDonalds Creek Mallalee Creek Manilla River Maules Creek (Maules or Kihi Creek) Menedebri Creek Middle Creek- tributary of Maules Creek Middle Creek- tributary of Coormore Creek Mitchells Creek Mollee Creek (Nuabla Creek) Mooki River (Conadilly or Mooki River) Moore Creek Mulgate Creek Mulla Mulla Creek (Mulla Creek) Myall Camp Warrambool Nangahrah Creek Narrabri Creek Nombi Creek Oaky Creek of Etoo Creek Sandy Creek- tributary of Peel River Saveall Creek Shearins Creek Smiths Creek Omaleah Creek Onus Creek Orphants Well Creek Pagan Creek Peel River Phillips Creek Pian Creek Pringles Rocky Creek (Pringles Rocky Gully) Pump Station Creek (Taylors Creek) (Tulcumbah Creek)	Quipolly Creek (Coeypolly Creek) Quirindi Creek Rangira Creek Rocky Creek-tributary of Coghill Creek Rocky Creek-tributary Spring Creek- tributary of Bohena Creek Spring Creek- tributary of Halls Creek Spring Creek- tributary of Namoi River down stream from Narrabri Swamp Oak Creek Talluba Creek Tamilies Creek Tangaratta Creek Timbumburi Creek Tulla Mullen Creek Turrabelle Creek Turragulla Creek Ulaman Creek Warrabah Creek Warrah Creek Watsons Creek Wearne Creek Werah Creek Werries Creek Wongo Creek Yaminba Creek Yaraman Creek Yarramanbah Creek (Yarrimanbah Creek) Yarramanbully Creek Yearinan Creek (Baradine or Spring or Yearinan Creek [Part])

CENTRAL WEST

BOGAN RIVER and the following tributaries and effluents of the Bogan River from its source to its junction with the Barwon River:

Barabadean Creek Belar Creek Beleringar River Bonar Billa Creek Boomi Creek Bradys Cowal Bulbodney Creek Bullock Creek	Burrill Creek Cadungle Creek Cookopie Creek Crowal or Whitbarrow Creek Duck Creek Emu Plains Creek	Enerwena Creek-effluent of Duck Creek Genaren or Back Creek Grahway or Pange Creek Gunningbar Creek Ingumburamy Creek Moore Creek	Mulla Mulla Creek Native Dog Creek Pange Creek East Ten Mile Creek Tigers Camp Creek Tomingley Creek Yangunyah Cowal Yarra Yarra Creek

CASTLEREAGH RIVER and the following tributaries and effluents of the Castlereagh River from its source to its junction with the Macquarie River:

Baby Creek Back Belar Creek Backwater Creek Bandicoot Creek Baronne Creek Belar Creek Bidden Creek Binnia Creek (Weetaliba Creek-tributary of Castlereagh River downstream from Binnaway). Black Swamp Creek Boltons Creek Bucklanbah Creek Bulgan Creek Butheroo Creek Calga Creek Collis or Bungle Gully Warrambool Creek Coonamble Creek Coybil Creek	Cumbadoon Warrambool Dead Mans Creek Denmire Creek Dinby Creek (Six Mile Creek) Dinnykymine Creek Four Mile Creek Frazers Creek Gamble Creek (Piambra Creek) Gidgenboyne Creek Gidgenbar Watercourse Greenbah Creek Gulargambone Creek (Galargambone or Tooraweanah Creek) Gunyillah Creek Ironbark Creek Jack Halls Creek Judes Creek Merrimbah, Bullarora, or Tourable Creek Merrygoen Creek Mogie Melon Watercourse	Mount Granby Creek Mow Creek Mowlma Creek Mungery Creek Murrumbah Creek (Murrumbah or Walla Walla Creek) Myall Plain Creek Nebea Creek Nedgera Creek Oaky Creek-tributary of Warrena Creek Piangula Creek Quanda Quanda Creek Queensborough Creek Ranters Creek Sand Creek Spring Creek Tenandra Creek Teridgerie Creek (Terembone, Teridgerie or Urawilkie Creek) Terrabile Creek Terrawinda Creek (Ulimambri Creek)	Tunderbrine Creek Uargon Creek Ulinda Creek Wallaroo Creek Wallumburrawang Creek Wambelong Creek Waniouri Creek (Wansouri Creek) Warrena Creek Worinjerong Creek (Warringerong Creek) Weetaliba Creek-tributary of Merrimbah, Bullarora, or Tourable Creek Wilber Creek Wingabutta Creek (Wangabutta Creek) Womat Creek Woolshed Creek Yallagal Creek

MACQUARIE OR WAMMERAWA RIVER and the following tributaries and effluents of the Macquarie or Wammerawa River from its source to its junction with the Barwon River:

Ade Creek Back Creek Balrudgery Creek Bara Creek Baragonumbel Creek Bell River Belourie Creek	Croppy Creek Cudgegong Creek Cudgegong River Cumboogle Creek (Bugle Cuble Creek) Cunningham or Crudine Creek	Marthaguy or Warren Creek Meadows Creek Merinda Creek Meroo CreekMerrigal Creek Merri Merri Creek	Sewells Creek Slapdash Creek Solitary Creek Spicers Creek Spring Creek-tributary of Muckerwa Creek Spring Creek-tributary

Beni Creek (Beni or Deep Creek) Beragoo Creek Big Creek Black Willow Creek Blathery Creek Boduldura Creek Bomely Creek Boothaguy or Calf-Pen Creek Boreenore Creek Bowenbong Creek Brammegan Creek Branch Creek Branch Gully Brisbane Valley Creek. Buckinbah, Burrawong or Burgoon Creek Budgebegumbil Creek Bugabada Creek Bulgeraga Creek Bullagreen Creek Bullock Flat Burrandong Creek Burrundulla or Oakey Creek Cainbill Creek Camerons Creek Campbells River Captain Kings Creek Carwell Creek Catos Creek Catula Creek Chain of Ponds Creek Cheshire Creek (Cheshires or Jesse Creek) Clear Creek Cockabutta Creek Collieblue Creek Collier Creek Cookamobil Creek Coolaburragundy River Coolamigal Creek Coolbaggie Creek Cooyal Creek Coxs Creek Crooked Creek-effluent of Macquarie River downstream from Warren	Curra Creek Curragurra Creek Darigal Creek Deep Creek Diana Creek Dilga Creek Dilladerry Creek Dog Trap Creek Duck Creek - effluent of Macquarie River Duckmaloi River (Fish or Duckmaloi River) Dun-Dun Creek Dunns Plain Creek Emogandry Creek Emu Swamp Creek Erudgere or McDonald's Creek Ewenmar Creek Fish River (Fish River Creek) Ganguddy Creek Ginger Creek Goan Creek Goodiman Creek Goolma Creek Goondy Creek Goorangore Creek Goulburn Creek Gowdaweda Creek Green Valley Creek Guigong Creek Gullengambel Creek Gundare Creek Gundy Creek Gunningbar Creek Hawkins Creek Herveys Range Creek Hyandra Creek Jannam Creek Jones Creek Kickabil Creek Kinggarragan Spring or Clarkes Creek Lawsons Creek Lewis Ponds Creek Little River Long Creek Loombah Creek Marra Creek	Middle Arm Creek Mitchells Creek Mogriguy Creek Molong Creek Morphetts Creek Muckerwa Creek Mumbedah Creek Narangarie Creek Native Dog Creek Neurea Creek Nora Creek Norfolk Island Creek Nubrigyn Creek Oakey Creek-tributary of Lewis Ponds Creek Oakey Creek-tributary of Macquarie River upstream from Burrendong Dam Oaky or Wickets Creek-tributary of Macquarie River downstream from Bathurst Paddys Creek Palmers Oaky Creek Piambong Creek Pinnacle Swamp Creek Pipeclay Creek Pyramul Creek Queen Charlottes Creek (Queen Charlottes Vale Creek) Redbank Creek-tributary of Meroo Creek Reedy Creek-tributary of Wialdra Creek Reedy Creek-tributary of Lawsons Creek Rocky Ponds Creek Sandy Creek-tributary of Talbragar River Sandy Creek-tributary of Buckinbah, Burrawong or Burgoon Creek Sandy Creek-tributary of Mitchells Creek Sawpit Gully	of Muckerwa Creek downstream from the junction of Muckerwa and Ginger Creeks Spring Creek-tributary of Spicers Creek Spring Creek-tributary of Talbragar River Stockyard Creek Stoney Creek-tributary of Macquarie River downstream from Bathurst Stony Creek-tributary of Cooyal Creek Stubbo Creek Summer Hill Creek [Fredericks Valley (Summer Hill) Creek and Fredericks Valley Creek] Swallow Creek Swan Creek Talbragar River Tallawang Creek Tambaroora Creek Trianbil Creek Tucklan Creek Turee Creek Turon River Two Mile Creek Uamby Creek Ulomogo Creek Uungula Creek Wando Wandong Creek Wemabung Creek Wialdra Creek Williwa Creek Winburndale Rivulet Wisemans Creek Wollerang Creek Woolandara Creek Wooloowoolanley Creek Worobil Creek

LACHLAN

LACHLAN RIVER and the following tributaries and effluents of the Lachlan River from its source to its junction with the Murrumbidgee River:

Abercrombie River	Caragabal Creek	Mandurama Ponds	Pint Pot Creek
Back Creek-tributary of Eua, Ooma, or Boyd Creek	Cargo Creek	Manildra Creek	Pudman Creek
	Congou Creek	Manna Creek (Bogardillon or Manna Creek)	Red Creek
	Conimbla Creek		Reedy Creek-tributary of Mandagery Creek
Back Creek-tributary of Goobang Creek	Cooks Vale Creek	Manus Creek	Reedy Creek-tributary of Phils River
	Coombing Rivulet	Marobee Creek	
Barmedman Creek (Mandamah or Barmedman Creek and Barmedman or Back Creek)	Copperhannia Creek	Merrill Creek	Retreat River
	Cowriga Creek	Merrimajeel Creek	Ridgey Creek
	Crokers Creek	Merrowie Creek (Marrowie or Gonowlia Creek)	Rocky Bridge Creek
	Crookwell River		Rushy Creek
	Crowie Creek		Sandy Creek
Bartleys Creek	Crowther Creek (Crowther, Koorawatha, or Back Creek)	Mianga Creek	Shaving Holes Creek
Belubula River		Middle Creek (Middle Billabong Creek)	Silent Creek
Berthong Creek-tributary of Bland Creek			Sletes Creek
	Cudgell Creek	Milburn Creek	Spring Creek
Bianalong Creek	Diamond Creek	Milvale Creek (Part) (Tumbleton Creek)	Tenandra Creek
Billabong Creek	Dicksons Creek		The Crooked Creek
Binda Creek	Dulladerry Creek	Mirrool Creek	Thompsons Creek
Binni Creek	Emu Creek	Mitchells Creek	Top Creek
Blackmans Creek	Eremeran Creek	Mogong Creek	Torriganny Creek
Blakney Creek	Eua, Ooma, or Boyd Creek	Moolbong Creek	Tuena Creek
Bland Creek (Bland or Yeo Yeo Creek)		Morongla Creek	Tumbleton Creek
	Euglo or Humbug Creek	Muggabah Creek	Tyagong Creek
Bocobra Creek		Mulgowrie Creek	Waarbilla Creek
Bolong River	Eurow Creek	Mulgunnia Creek	Wah Way Creek (Worway or Wah Way Creek)
Bomobbin Creek	Felled Timber Creek	Mumble Creek	
Booberoi Creek	Flyers Creek	Murringo Creek	
Boorowa River	Galwary Creek	Murrumbidgil Creek	Wallamundry Creek
Boree Creek	Geegullalong Creek	Narraburra Creek	Wallaroi or Yarnel Creek
Bouyaree or Cabbage Garden Creek	Goobang Creek	Narrallen Creek	
	Goonigaldoorigang Creek	Narrawa Creek	Warradgery Creek
Bowan Creek		Native Dog Creek	Waugoola Creek
Box Creek	Grabben Gullen Creek	Neila Creek	Weedallion Creek
Bramah Creek		Nerathong Creek	Werong Branch of Abercrombie River
Bribbaree Creek (Bribaree Creek)	Graingers Creek	Noobys Creek	
	Gunningbland Creek	Nyrang Creek	Wheeo Creek
Brothers Creek-tributary of Manus Creek	Hovells Creek	Oaky Creek-tributary of Mandagery Creek	Wiarborough Creek
	Isabella River		Willandra Creek (Willandra Creek and Willandra Billabong Creek)
	Island Creek	Oolong Creek	
Brundah Creek	Jacks Creek	Panuara Rivulet	
Bulla Creek	Jerrara Creek	Paling Yards Creek (Paling Yard Creek)	Yandumblin Creek
Bundaburrah Creek	Jerrawa Creek		
Burra Burra Creek	Jims Creek	Parliament Creek	Yangellawah Creek (Little Billabong or Yangellawah Creek)
Burra Creek	Kangarooby Creek	Peters Creek (Outer Weedallion Creek)	
Burrangong Creek	Kangiara Creek		
Burrangylong Creek	Kongaloolah Creek	Phils River-tributary of Bolong River	Yarrabundi Creek
Burthong Creek-tributary of Eremeran Creek	Lampton Creek		
	Lerida Creek	Phils Creek-tributary of Hovells Creek	
	Licking Hole Creek		

Cadiangullong Creek Canoble Creek Canomodine Creek	Limestone Creek Little Caragabal Creek Longs Creek Mandagery Creek	Pinnacle Creek	

MURRUMBIDGEE

MURRUMBIDGEE RIVER and the following tributaries and effluents of the Murrumbidgee River from its source to its junction with the Murray River:

Adelong Creek Adjungbilly Creek Alum Creek Back Creek Bago Creek Ballallaba Creek Ballinafad Creek Bareena Creek Beavers Creek Beavers Island Creek Big Badja River Billabung Creek Blind Creek Bogolong Creek Bramina Creek Bredbo River Bridle Creek Brooks Creek (Shinglehouse or Brooks Creek) Buddong Creek Budgee Creek Bullenbong Creek (Bullenbung Creek) Bumbolee River Bundidgerry Creek (Bundidjeery Creek) Burkes CreekCaddigat Creek Carabost Creek	Celeys Creek Cooleman Creek Cooma Creek Cooneys Creek Coonoon Creek Coppabella Creek Cowra Creek Cudgel Creek Cungegong Creek Cunningham Creek (Cunningham Creek and Connaughtmans Creek) Dairy Creek Demondrille Creek Derringullen Creek Douglas Creek Gillenbah Creek Gilmore Creek Ginninderra Creek Goobarragandra River Gooda Creek Goodradigbee River Graveyard Creek Gum Creek Gundaroo Creek Happy Jack River Hillas Creek (Hillas or Yaven Yaven Creek) Houlaghans Creek Jeir Creek (Jeir or Oaky Creek)	Jeremiah Creek Jerrabombera Creek Jugiong Creek Keajura or Six Mile Creek Kybeyan River Kydra Creek Kyeamba Creek Long Creek Manie or Tittara Creek Micalong Creek Mitta Mitta Creek Molonglo River Monkem Creek Mountain Creek Mundawaddery Creek Murraguldrie Creek Murrumbateman Creek (Morumbateman Creek) Muttama Creek Numeralla River (Umaralla River) Oak Creek O'Briens Creek Old Man Creek Paiko or Peacock Creek Peppercorn Creek Pinchgut Creek Queanbeyan River	Rocky Ponds Creek (Spring Creek) Sandy Creek Shaking Bog Creek (Bondi Creek) Slacks Creek Spring Creek-tributary of Cooneys Creek Tala Creek Tantangara Creek Tarcutta Creek (Tarcutta or Oberne Creek) The Gum Creek The Peak Creek Tinderry Creek Tumut River Uara Creek Umbango Creek Waldaira Creek Wambrook Creek Wantiool Creek Warroo Creek Winifred or Punch Bowl Creek Yammatree Creek Yanga Creek Yanco Creek (Yanko Creek) Yarrangobilly River Yass River

MURRAY

MURRAY RIVER from its source to the South Australian border and the following tributaries and effluents of the Murray River:

Aluminy Creek Ana Branch of Darling River	Euroley Creek Forest Creek-tributary of Moulamein or	Native Dog Creek Niemur River Noeyanga Creek	Two Mile Creek Urangeline Creek

Aratula Creek Armstrongs Creek Back Creek Backwater Creek Barbers Creek Barratta Creek Basin Creek Bengalow Creek Billabong Creek Blind Creek Bogong Creek Bookit Creek Bowna Creek Box Creek Brookong Creek Buccaneit Creek Bullatale Creek Bullock Creek Bullockhide Creek Burra Creek Burragorrima Creek Burrumbury Creek Christies Creek Cocketgedong Creek Cockran Creek Colligen Creek Colombo Creek Coobool Creek Coppabella Creek Cunninyeuk Creek Deans Creek Dicks Creek Eagle Creek Eight Mile Creek	Billabong Creek Forest Creek-tributary of Kyalite or Edward River Frenchmans Creek Geehi River (Geehi or Swampy Plain River) Gol Gol Creek Gulpa Creek Horse Creek Jerra Jerra River (Jerra Jerra Creek) Jimaringle Creek Jingellic Creek Khancoban Creek Kyalite or Edward River Lankeys Creek Little Billabung Creek Little Merran Creek Little Murray River Majors Creek Mallan Mallan Creek Manie or Tittara Creek Mannus Creek Maragle Creek Merangatuk Creek Merran Creek Merribit Creek Middle Creek Moulamein or Billabong Creek Mullanjandra Creek Munderoo Creek Murain Yarrien Creek Ooronong Creek	Nooroong Creek Nowranie Creek Nyangay Creek Nyrangi Tuppal Creek Paddys River Paiko or Peacock Creek Papanue Creek Pelham Creek Porthole Creek Puah Creek St Helena Creek Seven Mile Creek Spring Creek Spring Flat Creek Swampy Plain Creek Swampy Plain River [Part] (Murray or Swampy Plain River) Taylors Creek Ten Mile Creek The Box or Forest Creek-tributary of Kyalite or Edward River downstream from its junction with Moulamein or Billabong Creek Thulabin Creek Thule Creek Tipperary Creek Tooma River Towrong Creek Tumbarumba Creek Tuppal Creek Turn Back Jimmy Creek	(Urangeline Creek and Urana Creek) Wakool River Waldaira Creek Wangamong Creek [Part] (Algudgerie Creek and Wongamong or Coreen Creek) WantagongCreek) Washpen Creek Washpool Creek (Washpool Gully) Wee Wee Creek Welumba Creek Werrimble Creek Whymoul Creek Woomargama or Mountain Creek Wyam Creek Yallakool Creek Yanco Creek (Yanko Creek) Yarra Yarra Creek Yarrein Creek-effluent of Kyalite or Edward River Yarrein Creek-tributary of Wakool River) Yellow Bog Creek

WESTERN

BARWON RIVER and the following tributaries and effluents of Barwon River from the confluence of Macintyre River and Weir River (Qld) near Mungindi and extending to its confluence with Culgoa River:

Ballamanga Creek Ballone Creek Boggy Creek Bogree or Marshalls Pond Creek Bokhara River Boomangera Creek	Commillomori Creek Courallie Creek (Coorallie Creek) Curramanga Creek (Caramanga Creek) Crawfords Arm Creek Crooked Creek	Grawan Creek Hospital Creek Hughys Arm Creek Little Bumble Creek Manamoi Creek Marra Creek Meeki Creek	Nee Nee Creek Reedy Water Creek Sugarloaf Arm Creek Tarpaulin Creek Tarrian Creek Ten Mile Creek Thalaba Creek

Boomi River Budelah Creek Bunna Bunna Branch of Wallon Creek Carole Creek (Carore Creek and Medgun Creek) Cato Creek	Croppa Creek Geary Creek Gehan Creek Gil Gil Creek Gingham Watercourse (The Gingham Water course) Ginghet Swamp Creek	Mooni River (Mooni Creek) Mt Pleasant Creek Mungaroo Warrambool Mungle Back Creek Mungle Creek Myall Hollow Creek Narrandool Creek	The Big Warrambool The Watercourse Lagoon Wallon Creek Waterloo Creek Whalan Creek- tributary of Boomi River Womat Creek Yallaroi Creek Berawinnia Creek (Berawinia or Cardenyabba Creek).

BOGAN RIVER from its source to its junction with the Barwon River together with tributaries and effluents of the Bogan River included in the listing for the Central West CMA that lie partly or wholly within the area of the Western CMA.

Cuttaburra Creek and following tributaries:

Brindingabba Creek
Kulkyne Creek

DARLING RIVER from its confluence with the Culgoa River to its junction with the Murray River and the following tributaries and effluents of the Darling River:

Acres Billabong Ana Branch of Darling River Bickerjerry Creek Birrie River Booligal Creek Bow Creek Briarie Creek Bunbulya Creek Bunker Creek Burbar Creek Coonalhugga Creek Coopara Creek Culgoa River Cullewie Creek	Enerwena Creek Green Creek Irrara Creek Jamiesons Billabong Kallyanka Creek Kerribree Creek Kerrigundi Creek Lake Creek Marra Billabong Middle Creek Milkengay Creek Mogila Creek Monday Creek Mulga Creek Myers Creek	Narran River Natalio Creek Nebie or Nebine Creek Nooramia Creek Papepapinbilla Creek Paroo Channel Paroo River Pine Creek Possum Creek Redbank Creek Snake Flat Creek Talowla Billabong Talyawalka Creek Tandou Creek Talyawalka Ana Branch	of Darling River Teryaweynya Creek The Dry Bogan The Little Warrambool Tinghi Creek Tongo Creek Two Mile Creek Undeathi Creek Upper Talyawalka Ana Branch of Darling River Wannara Creek Warrego River Widgeegoara Creek Willyeroo Creek Woychugga Creek Yampoola Creek Yanda Creek

LOWER MURRAY-DARLING

DARLING RIVER from its confluence with the Culgoa River to its junction with the Murray River together with tributaries and effluents of the Darling River included in the listing for the Western CMA that lie partly or wholly within the area of this CMA.

MURRAY RIVER from its source to the South Australian border together with tributaries and effluents of the Murray River included in the listing for the Murray CMA that lie partly or wholly within the area of this CMA.

NORTHERN RIVERS

BELLINGER RIVER (NORTH ARM and SOUTH ARM BELLINGEN RIVER) and the following tributaries of Bellinger River:

- Kalang River (South Arm Bellingen River)
- Never Never River (Never Never or North Creek)
- Rosewood River (Little North Arm)

Bilumbil Creek

Boambee Creek and following tributaries:

- Middle Branch
- North Branch
- South Branch

Bonville Creek and following tributary:

- Pine Creek

Brunswick River and following tributaries:

- Christies Creek
- Kings Creek
- Marshalls Creek (or North Arm of Brunswick River)
- Mullumbimby Creek

Burringbar Creek

Camden Haven River (Camden Haven River and Southern Branch) and the following tributary of the Camden Haven River:

- Upsalls Creek [Part] (Northern Branch)
- Camden Haven Inlet

CLARENCE RIVER and the following tributaries of the Clarence River:

Aberfoyle River	Coutts Water	Jocks Water	
Acacia Creek	Cradle Creek	Joes Gully	Pantons Creek
Allans Water	Crooked Creek	Kangaroo Creek-	Peacock Creek

Arundel Creek	Crystal Creek	tributary of Aberfoyle	Peg Leg Creek
Back Creek-tributary	Cullendore Creek	River	Pine Creek
of Middle Creek	Cullens Creek	Kangaroo Creek-	Plumbago Creek
Back Creek-tributary	Culmaran Creek	tributary of Tooloom	Pretty Gully
of Orara River	Cunglebung Creek	Creek	Pulganbar Creek
Baffle Creek	Dairy Creek	Kangaroo River	Punchbowl Creek
Bald Nob Creek	Dairy Swamp Creek	(Kangaroo Creek-	Purgatory Creek
Bangalore Creek	Dandahra Creek	tributary of Orara	Quigeram Creek
Bangalow Creek	Deer Park Creek	River)	Red Soil Creek
Banyabba Creek	(Deer Park River)	Koreelah Creek	Reedy Creek
Bark Hut Creek	Demon Creek	Left Hand Branch	Right Hand Branch of
Barretts Creek	Desert Creek	Lindesay Creek	Chandlers Creek
Beaury Creek	Dinner Creek	(Lindsay Creek)	Rocky Creek-tributary
Bielsdown River	Dinner Camp Creek	Little Cullens Creek	of Bielsdown River
(Bielsdown Creek).	Dirty Creek	Little Falls Creek	Rocky Creek-tributary
Big Bull Creek	Doughboy Creek	(Little Falls or	of Coalbrook Creek
Billyrumba Creek	Downfall Creek	Freeman Creek)	Rocky Waterholes
Billys Creek	Dubedah Creek	Little Haystack Creek	Creek
Blaxlands Creek	Duck Creek (Tooloom	Little Murray River	Ruby Creek
(Blaxlands or	Rivulet or Duck Creek	Little Nymboida River	Sandy Creek
Deadman Creek)	and Bonalbo Creek)	Little Oaky Creek-	Sandy Camp Creek
Blicks River	Dulgigin Creek	tributary of Koreelah	Sara River
Bobo River (Bobo	Dumbudgery Creek	Creek	Shannon Creek-
Creek)	Dundoo Creek	Little Plain Creek	tributary of Boundary
Bookookoorara River	Eagle Hawk Creek	McCanns Gully	Creek
Boomi Creek	Eight Day Creek	Main Creek	Shannon Creek
Boonoo Boonoo River	Emu Creek	Majors Creek	(Shannon or Deep
Boorook Creek	Esk River	Malara Creek	Creek)
Borra Creek	Eve Creek	Mangrove Creek	Sheep Station Creek
Boundary Creek-	Ewingar Creek	Mann River (Mann or	(Sheepstation Creek)
tributary of Nymboida	Five Mile Creek-	Mitchell River)	Sherwood Creek
River downstream	tributary of Koreelah	Marengo Creek	(Sherwood or
from Deer Vale	Creek	Marowan Creek	Wongabi creek)
Boundary Creek-	Five Mile Creek-	Maryland River	Silver Queen Gully
tributary of Pantons	tributary of Maryland	Mattiers Creek	Sixteen Mile Creek
Creek	River	Meldrum Creek (Back	Slaughteryard Creek
Boundary Creek-	Five Mile Creek-	Creek-tributary of	Smith's Creek
tributary of Nymboida	tributary of Tooloom	Deer Park Creek)	Smiths Gully
River downstream	Creek	Merchin Creek	South Arm of the
from Nymboida.	Five Snake Creek	Middle Creek	Clarence River
Boyd River (Boyd or	Flagstone Creek -	Middle Creek (Little	Sportsmans Creek
Little River)	tributary of Koreelah	Creek)	Star Creek
Branch Creek-	Creek	Middle Creek (Middle	Stockyard Creek
tributary of Acacia	Flagstone Creek-	or Boyd Creek)-	Table Creek
Creek Branch Gully	tributary of Tooloom	tributary of Boyd River	Tabulam Rivulet
Brimbin Creek	Creek	Middle Creek	Tallawudjah Creek
BroadwaterCreek	Fortis Creek	(Halfway or Middle	(Tallonagal or
(Part) (Broadwater or	Four Mile Creek-	Creek tributary of	Tallawudjah Creek)
Great Estuary Creek)	tributary of Blicks	Orara River) Mirum	The Broadwater
Bucca Creek	River	Creek	The Lambing Gully
Buccarumbi Creek	Four Mile Creek-	Mole Creek	Timbarra River
Camp Creek-tributary	tributary of Maryland	Mookima Wybra	(Timbarra or Rocky
of Little Nymboida	River	Creek	River)
River	Fourteen Mile Creek	Morven Creek	Tooloom Creek
Camp Flat Creek	Frazers Gully	Mosquito Creek-	Tooloom Gully

Cangai Creek (Cangi Creek) Capeen Creek Captains Creek Carpet Snake Creek Carpet Snake Gully Carrolls Creek Cataract River (Cataract River and Swamp Oak Creek) Chambigne Creek Chandlers Creek Chandlers Creek-Right Hand Branch Circular Flat Creek Clouds Creek Coalbrook Creek Coldwater Creek Coldstream Creek Coldstream River Connaughtmans Creek Coombadjha Creek Coonoom Gully Coopernook Creek Cooraldooral Creek Copes Creek	Gilgurry Creek Girard Creek Glen Elgin Creek Glen Fernaigh River (Glen Fernaigh Creek) Glenugie Creek (Glen Ugie Creek) Gordon Brook Gorge Creek Grahams Creek Gulf Creek-tributary of Cunglebung Creek Gundah Creek Guy Fawkes River Halfway Creek-tributary of Dundoo Creek Hassans Creek Haystack Creek Henry River (Henry River and Little Henry River) Herding Yard Creek Humbug Gully Hylands Creek Iron Pot Creek Jackys Creek	tributary of Cunglebung Creek Nana Creek Needhams Creek Nelson Creek (Rocky Creek-tributary of Timbarra River) Nowlands Backwater Creek Nowlands Creek Nymboida River Oaky Creek-tributary of Koreelah Creek Oaky Creek-tributary of Tooloom Creek Oban River (Ann or Oban River) Obeloe Creek Opossum Creek Orara River Orooroo Creek Palmers Creek	Towgon Creek Tunglebung Creek Urumbilum River Valorem Creek Wallaby Creek Washpool Creek Wild Cattle Creek Willowie Creek Wombat Creek Woodenbong Creek Wooloweyah Estuary Wylie Creek Yabra Creek Yarrow River Yarrum Creek Yellowbank Creek Wayper Creek Wellington Creek Whisky Creek Whiteman Creek (Coatbrook or Whiteman Creek)

Coffs Creek

Corindi River (Corindi Creek or Redbank River) and following tributary:

- Dirty Creek

Cowarra Creek

Crabbes Creek

Cudgera Creek

Deep Creek

Duroby Creek

Evans River

HASTINGS RIVER (Hastings River and Mooraback Creek) and the following tributaries of the Hastings River:

Bells Creek Bitter Ground Creek Blackbutt Creek Bottlebrush Creek (Bottle Brush Creek) Bril Bril Creek Bunnoo River Cedar Creek Cockerawombeeba Creek Coolapatamba Creek Cowal Creek Doyles River (North Branch of Wilson River)	Ellenborough River Fenwicks Creek Forbes River Frazers Creek Glencoe Creek (Part) (North Branch of Wilson River) Grasstree Creek (Grass Tree Creek) Hynimans Creek Inlet Creek Jasper Creek Kumbatine Creek	Kindee Creek (Kindee Brook) Limeburners Creek Maria River Mortons Creek Murrays Creek Pappinbarra River (Part) (Pappinbarra Creek) Pine Scrub Creek Pipers Creek Ralfes Creek (Sheepstation Creek or Ralfes Rivulet)	Ready Money Creek Rudders Creek Sawyers Creek Smiths Creek Stockyard Creek Stony Creek Thone River Tobins River (Tobins Creek) Toms Creek (Karaghine or Toms Creek) Wilson River Yarras Creek Herons Creek (Herons Creek or Queens Lake River)

MACLEAY RIVER (Macleay River and Muddy River) and the following tributaries of the Macleay River:

Apsley River Back Creek Bakers Creek Blue Mountain Creek Boundary Creek (Back or Boundary Creek) Carrai Creek Chandler River Christmas Creek Collombatti Creek (Colombatti or Trial Bay Creek) Combatine Creek Commissioners Waters (Commissioners Waters or Tilbuster Ponds) Demon Creek	Dungay Creek (Mackenzies or Oreen Dyke River Eight Mile Creek Emu Creek Five Day Creek (Comara or Five Day Creek) Four Mile Creek (Ponds or Four Mile Creek-a tributary of Bakers Creek) Gara River (Gyra River) Georges River (Part) (Georges Creek) Hickeys Creek Hillgrove Creek	Jeogla Creek Kunderang Brook Mackenzies Creek Macleods Creek Maiden Creek Nulla Nulla Creek Oaky River Ohio Creek Pardee Creek Parrabel Creek Peters Creek Pint Pot Creek Ponds Creek-tributary of Oaky River Powers Creek Puddledock Creek Salisbury Waters	Saumarez Creek Station Creek Stockyard Creek Stony Creek (Stony or Brook) Dowd Creek) Styx River Tia River Tiara Creek Warbro Brook Warnes River Wilson Creek Winterbourne Creek Wollomombi River (Woolomombi or Rockvale Creek) Yarrowitch River

Mooball Creek

Moonee Creek

NAMBUCCA RIVER and the following tributaries of the Nambucca River:

- Bowra River
- Buckra Bendinni Creek

- Missabotti Creek
- North Creek
- Rhones Creek
- South Creek
- Taylors Arm
- Warrell Creek

Pine Brush Creek

RICHMOND RIVER and the following tributaries of the Richmond River:

Babyl Creek Back Creek Battens Bight Creek (Batterns Bight Water course and Six Mile Waterholes [Part]) Benny Creek Boorabee Creek Boundary Creek Branch Creek Bungawalbin Creek (Bungawalbin Creek or South Arm of Richmond River) Burgeebeebra Creek Busbys Creek Byron Creek Cabbage Tree Creek-tributary of Four Mile Creek Cabbage Tree Creek-tributary of Middle Creek	Camira Creek Camp Creek Cherry Tree Creek Cob o'Corn Creek Collins CreekCoopers Creek Doubtful Creek (Rose or Doubtful Creek) Duck Creek Dyraaba Creek Eden Creek Emigrant Creek Fawcetts Creek Four Mile Creek Frenchs Creek Goolmangar Creek (Goolmagar or Rosehill Creek) Gradys Creek (Fords or Gradys Creek) Horseshoe Creek Iron Pot Creek	Jiggi Creek Leycester Creek (Hanging Rock or Leycester Creek) Long Creek Lynchs Creek Marom Creek Middle Creek Mongogarie Creek Mulgum Creek Myall Creek Myrtle Creek Neils Creek North Creek Pelican Creek Phillip Creek Pine Creek Rocky Creek Roseberry Creek Sandy Creek Sawpit Gully Shannon Brook (Deep Creek or Shannon Brook)	Six Mile Creek (Six Mile Waterholes [Part]) Skinners Creek Smiths Creek Terrace Creek Terania Creek The Broadwater The Long Lagoon Theresa Creek Tucki Tucki Creek Tuntable Creek (Tuntalble Creek) Websters Creek Wilsons River (Wilsons Creek and North Arm of Richmond River) Sandon River and following tributaries: Candole Creek Toumbaal Creek Stewarts River Terranora Creek

TWEED RIVER (TWEED RIVER and SOUTH ARM OF TWEED RIVER) and the following tributaries of the Tweed River:

Bilambil Creek (Bilumbil Creek) Brays Creek Byrrill Creek Cedar Creek Chowan Creek Cobaki Creek Commissioners Creek Crystal Creek Doon Doon Creek Dulguigan Creek	Dunbible Creek Dungay Creek (Mejean or Dungay Creek) Duroby Creek Hopping Dicks Creek Korrumbyn Creek Kunghur Creek Oxley River (Middle Arm of Tweed River) Perch Creek Piggabeen Creek	(Bradys or Piggabeen Creek) Pumpenbil Creek (Pumpenbill Creek) Rolands Creek Rous River (North Arm of Tweed River) Smiths Creek Tyalgum Creek Wollumbin Creek Woolgoolga Creek	Wooli Wooli River (Wooli Wooli or Little River) and the following tributaries of this stream: Bookram Creek Corkscrew Creek Matenga Creek Woodduck Creek

HUNTER/CENTRAL RIVERS

Booloombayt Creek

Dora Creek

HUNTER RIVER and the following tributaries of the Hunter River:

Allyn River Back Creek Baerami Creek (Part) (Baerami or James Creek) Barigan Creek Bellaleppa Creek Bengang Creek Black Creek Blackwater Creek Blaxlands Valley Bobialla Creek Boonabilla Creek (Boonabilla or Mount Royal Creek) Borambil Creek Bow River (Bow Creek) Branch Creek Brush Hill Creek [Part] (Brush Hill Creek and Western Branch of Brush Hill Creek) Burrumbelong Creek Bylong River (Bylong Creek) Campbells Creek Coggan Creek Congewai Creek (Coongewai Creek and North Arm of Wollombi Brook) Coulsons Creek Cousins Creek Cream of Tartar Creek Cumbo Creek Dart Brook Davis Creek Donalds Creek	Carrow Brook Cattle Creek Cedar Creek-tributary of Emu Creek Cedar Creek-tributary of Congewai Creek Chichester River Cooba Bulga Stream Doyles Creek Dry Creek Emu Creek Fal Brook Four Mile Creek Foy Brook Ganga or Hall Creek Giants Creek Ginghi Creek Glendon Brook Goorangoola Creek Goulburn River Growee River (Growee Creek) Guan Gua Creek Baerami Creek) Jemmys Creek Killoe Creek Kingdon Ponds Krui River Lambs Valley Creek Lorimer Creek Lewinsbrook Creek Middle Creek Milbrodale Creek (Milbrodale Brook) Moolarben Creek Moonan Brook (Moonan Brook or Bells Creek)	Gungolwa Creek Halls Creek (Gungal or Halls Creek) Hungerford Creek (Part Baerami Creek) Iron Bark Creek Isis River James Creek (Part Munmurra River (Munmurra Brook) Munningbah Creek Murragamba Creek Murrumbline Creek Muscle Creek Myall Creek Myrtle Creek (Myrtle Creek and Right Hand Flat Rock Creek) New Appletree Flat or Queens Creek North Wambo Creek Pages Creek Pages River Parsons Creek Paterson River Peters Creek Red Creek Red Bank Creek Reedy Creek Rixs Creek Rouchel Brook Saddlers Creek Sandy Creek (Saint Hilliers Brook or Sandy Creek) Sandy Creek Scotts Creek Snake Creek Stanhope Creek	Loders Creek Martindale Creek (Bureen or Greigs Creek) Meads Gully Merriwa River (Harrys or Middle Creek and Smiths Rivulet or Merriwa Creek) Stewarts Brook Thompsons Creek Timor Creek Tomimbil Creek Turrill Creek. (Turrill or Rocks Creek) Ulan Creek Vallances Creek Wallarobba Creek Wallis Creek (Mulbring or Wallis Creek) Wambo Creek Wangat River Warlands Creek Watagan Creek Webbers Creek West Brook Whites Creek (Part) (Brush Hill Creek upstream of Western Branch Brush Hill Creek) Widden Brook (Widdin Brook) Wilpinjong Creek Williams River Witty Wally Creek Worondi Rivulet Wollar Creek Wollombi Brook Wybong Creek Yango Creek

KARUAH RIVER and the following tributaries of the Karuah River:

Larpent River Limeburners Creek	Mammy Johnsons River (Mammy	Ramstation Creek Wards River	Khappinghat Creek

	Johnsons Creek)		

MANNING RIVER and the following tributaries of the Manning River:

Avon River Back River Bakers Creek Barnard River Barrington River Berrico Creek Bo Bo Creek (Bow Bow Creek) Bowman River Burrell Creek (Burrill Creek) Caparra Creek (Dingo Creek-Western Branch) Cedar Party Creek (Pahpoo or Cedar Party Creek) Cells River Cobark River (Part) (Arundel River) Cooplacurripa River Cravens Creek Curricabark River	(Curricabark Creek) Dawson River Dewitt Creek Dilgry River Dingo Creek (Dingo Creek and Dingo Creek Eastern Branch) Gloucester River Kerripit River (Kerripit River or Rawdon Stream) Killabakh Creek Landsdowne River Mernot Creek Mummel River Myall Creek (Part) (Myall River) Nowendoc River River (Number Two or Rowleys River) Schofields Creek	Scotts Creek South Channel of the Manning River Orham Creek Pigna Barney River Rowleys Tuggolo Creek Waukivory Creek Myall River and the following tributaries of this stream: Crawford River The Broadwater Ourimbah Creek Wollomba River (Browns Creek or Wollomba River and Wollomba River) and the following tributaries of this stream:	Fire Fly Creek Khoribakh Creek Kooloombakh Creek Wallingat River and following tributaries: Bunyah Creek Gooloongolok River Wang Wauk River Wyong River (Wyong Creek) and the following tributaries of this stream: Cedar Brush Creek (Cedar or Old Brush Creek) Jilliby Jilliby Creek

HAWKESBURY-NEPEAN

HAWKESBURY RIVER and the following tributaries of the Hawkesbury River:

Avon River Bedford Creek Bellbird Creek Berowra Creek Blue Scrub Creek Bowens Creek Box Creek Budthingeroo Creek Burralow Creek Butchers Creek Cabbage Tree Creek Capertee River Cataract River Cattai Creek Coco Creek (Cooks or Coco Creek) Colo River Cordeaux River Council Creek Cowan Creek Coxs River	Guineacor Creek Gundary Creek Hanrahans Creek Hollanders River Howes Waterhole Creek Jamiesons Valley Creek Jenolan River Joadja Creek Jooriland River [Part] (Jooriland Creek) Kellys or Browns Creek Konangaroo River Kowmung River Little Wheeny Creek Long Swamp Creek (The Long Swamp and Deep Creek) Macdonald River	Mogo Creek (Wallambine or Mogo Creek) Mooney Mooney Creek Morong Creek (Boyd or Morong Creek) Mount Wayo Creek (Pegar Gully) Mulwaree River (Mulwaree Ponds and Mulwaree Creek) Murruin Creek Myrtle Creek Nattai River Nepean River Paddys River (Patricks or Paddys River) Popran Creek Putty Creek (Tupa or	Dunnfield Creek South Creek Tarlo River (Tarlo Creek or Cookbundoon River) Tomah Creek-tributary of Grose River Tomahawk River Tonalli River Tootie Creek Tuglow River Warragamba River Warre Warren Creek Webbs Creek Wheeny Creek Wingecarribee River Wolgan River Wollangambe Creek Wollemi Creek Wollondilly River

Currency Creek Glen Eden Creek Green Wattle Creek Grose River	Main Creek Monkey Creek (Werriberri or Monkey Creek) Mangrove Creek Marramarra Creek	Putty Creek) Pyes Creek Redbank Creek Roberts Creek Sheep Station or	Woolshed Creek (Taralga Creek) Wrights Creek Yengo Creek

SYDNEY METRO

GEORGES RIVER and the following tributaries and effluents of the Georges River:

Cabramatta Creek O'Hares Creek	Stokes Creek	Woronora River	Port Hacking River

SOUTHERN RIVERS

BEGA RIVER and the following tributaries of Bega River:

Bemboka River Brogo River Candelo Creek (Bateman Creek and	Candelo Creek) Colombo Creek Devils Creek	Double Creek Polacks Flat Creek Sandy Creek	Tantawanglo Creek (Tantawangalo Creek) Wolumla Creek Bermaguee River

CLYDE RIVER and the following tributaries of Clyde River:

Bimberamala River (Bimberamala Creek) Boyne Creek Buckenbowra River Cockwhy Creek Currowan Creek Nelligen Creek Quart Pot Creek	Yadboro River (Yadboro Creek) Congo Creek Coonemia Creek Croobyar Creek Crookhaven River Currumbene Creek	Dignams Creek and following tributary: Couria Creek (Karea Creek) Genoa River (part) (Bondi Creek) and following tributaries of the Genoa River:	Captains Creek (Captain's Swamp) Nungatta Creek White Rock Creek Imlay Creek Macquarie Rivulet

MORUYA RIVER (Deua or Moruya River) and the following tributaries of the Moruya River:

Araluen Creek Burra Creek Deua River (Deua or Moruya River)	Moodong Creek Mullet Creek Murrah River	Nariri River Nullica River (Myrrial or Nullica River)	Pambula River (Panbula River) Parma Creek

SHOALHAVEN RIVER and the following tributaries of the Shoalhaven River:

Boro Creek Brogers Creek Broughton Creek Budjong Creek (Dan	Bungonia Creek Calymea Creek Corang River Curra Creek	and Gillitamatong or Monkittee Creek)Jacqua Creek (Yarralaw Creek or	Jerrara Creek Kangaroo River Millinded Creek Mongarlowe River

Wards or Budjong Creek) Bugong Creek Bundanoon Creek Bundundah Creek	Danjera Creek Endrick River Ettrema Creek Gillamatong Creek (Gillitamatong, Creek	Jacqua Creek) Jembaicumbene Creek Jerrabattgulla Creek (Oronmear or Jerrabattgulla Creek) Jinden Creek	Nadgigomar Creek Nerrimunga Creek Reedy Creek Yarrunga Creek Yalwal Creek

SNOWY RIVER and the following tributaries of the Snowy River:

Ashton Creek Back Creek (Back Creek or Packers Swamp) Beloka Creek Bennetts Creek Biggam or Rocky Plains Creek Bobundara Creek Bombala River Bukalong Creek (Brugolong Creek) Burrungubugge Creek Cambalong Creek	Coolumbooka River Cootralantra Creek Currowang Creek Delegate River (Delegete River) Dutton Creek Eucumbene River Frying Pan Creek Grassy Flat Creek Great Popong Creek Grosses Plain Creek Gully or Tin Mine Creek	Gungarlin River Hobbs Creek Ingeegoodbee River Jacksons Bog Jacobs or Tongaroo River Jerrys Flat Creek Kara Creek Lambing Creek Thredbo River (Crackenback or Thredbo River)	Tinga Ringee Creek Tombong Creek Upper Dog Kennel Creek Warburton Creek Wollindibby Creek Wullwye Creek Tomaga River and the following tributary of this river: Jeremadra Creek (Mogo Creek)

TOWAMBA RIVER and the following tributaries of the Towamba River:

Mataganah River Myrtle Creek	(Scotcheys or honeysuckle Flat Creek)	Pericoe Creek (New Station Creek and Bennetts Creek)	New Station Creek Stockyard Creek Wog Wog River

TUROSS RIVER (Tuross River and Dolondundale or Tools Creek) and the following tributaries of the Tuross River:

Belimbla Creek Guinea Creek Reedy Creek Wadbilliga River Waila Creek Wandella Creek	(Wandellow Creek) Wagonga River and following tributary: Little Dromedary Creek Wallagaraugh River	Wandandian Creek (Wandrawandian Creek) Wonboyn River and the following tributaries of this stream:	Narrabarba Creek Watergums Creek Yowaka River (Back Creek or Yowaka River)

Appendix B Nationally Important Wetlands in NSW

Wetland name	Reference No.	IBRA Region[1]	Area (ha)	Wetland type(s)[2]	Criteria for inclusion[3]
Border Rivers/Gwydir Catchment Management Authority					
Gwydir Wetlands	NSW008	DRP	102120	B2, B4, B5, B6, B10, B14	1, 3, 5
New England Wetlands	NSW023	NET	30	B5, B6, B9, B10, B15	1, 2, 3, 4, 6
Morella Watercourse / Boobera Lagoon / Pungbougal Lagoon	NSW095	DRP	460	B5	1, 2, 3, 6
Central West Catchment Management Authority					
Macquarie Marshes	NSW009	DRP	200000	B1, B2, B4, B9, B10, B13, B14	1, 3
Hawkesbury Nepean Catchment Management Authority					
Blue Mountains Sedge Swamps	NSW072	SB	35	B15	1, 2, 5
Boyd Plateau Bogs	NSW074	SB	-	B15	1, 2, 5
Longneck Lagoon	NSW083	SB	24	B9, B10	3, 5, 6
Thirlmere Lakes	NSW091	SB	50	B5, B15	1, 2, 3, 4, 6
Wingecarribee Swamp	NSW093	SB	691	B15, C1, C5	1, 4, 5, 6
Hunter Central Rivers Catchment Management Authority					
Barrington Tops Swamps	NSW025	NNC	1500	B15	1, 2, 5
Myall Lakes	NSW033	NNC	31777	A2, A4, A5, A6, A7, A8, A9, A10, A11, A12	1, 2, 5
Port Stephens Estuary	NSW034	NNC	30253	A2, A6, A7, A8, A9	1, 3, 5
Wallis Lake and adjacent estuarine islands	NSW038	NNC	8556	A2, A6, A7, A8, A9	1, 3, 5
Kooragang Nature Reserve	NSW080	SB	2926	A4, A5, A6, A7, A8, A9, A11	1, 3, 4, 5, 6
Shortland Wetlands Centre	NSW089	SB	45	A11, A12	3, 6
Brisbane Water Estuary	NSW132	SB	2768	A5, A6, A7, A8, A9	2, 3, 4
Budgewoi Lake Sand Mass	NSW133	SB	112	A5, A6, A7, A9	2, 3, 5
Colongra Swamp	NSW134	SB	60	A11	3
Ellalong Lagoon	NSW136	SB	250	A11, A12	1, 3
Hexham Swamp	NSW138	SB	1750	A6, A8, A9, A10, A11, C8	1, 2, 3, 4, 5, 6
Tuggerah Lake	NSW141	SB	600	A5, A6, A7, A8, A9	3, 4
Wyong Racecourse Swamp	NSW143	SB	60	A11	2, 3, 5
Salt Ash Air Weapons Range[C]	NSW178	NNC	2790	A6, A8, A9, B4, B9, B10, B13, B14	1, 2, 3, 5
Lachlan Catchment Management Authority					
Lake Cowal/Wilbertroy Wetlands	NSW040	NSS	20500	B3, B6, B13, B14	1, 2, 3
Booligal Wetlands	NSW043	RIV	5000	B2, B4, B10, B13, B14	1, 2, 3
Cuba Dam	NSW044	RIV	1680	B2, B4, B9, B13, C1	1, 3, 4
Great Cumbung Swamp	NSW045	RIV	16000	B1, B2, B4, B6, B9, B10, B13, B14	1, 2, 3, 4
Lachlan Swamp (Part of mid Lachlan Wetlands)	NSW047	RIV	6600	B1, B2, B4, B6, B10, B14	1, 2, 3
Lake Brewster	NSW048	RIV	6140	B6	1, 3, 5
Lake Merrimajeel/Murrumbidgil Swamp	NSW049	RIV	300	B2, B4, B6, B13, B14	1, 3, 6

Merrowie Creek (Cuba Dam to Chillichil Swamp)	NSW051	RIV	2500	B6, B13, C2	1, 2, 3
Lower Murray Darling Catchment Management Authority					
Menindee Lakes	NSW010	DRP	45000	B2, B4, B5, B6, B13, B14, C1	1 3, 4, 5
Darling Anabranch Lakes	NSW020	MDD	269000	B2, B4, B6, B10, B13, B14	1, 2, 5
Murray Catchment Management Authority					
Koondrook and Perricoota Forests	NSW046	RIV	31150	B1, B2, B4, B10, B14	1, 2
Millewa Forest	NSW053	RIV	33636	B1, B2, B4, B6, B10, B14,	1, 2, 3, 4, 5
Wakool-Tullakool Evaporation Basins	NSW055	RIV	2100	C1, C4, C6	1, 3
Werai Forest	NSW056	RIV	11234	B1, B4, B10, B14	1, 2, 5
Walla Walla Swamp (Gum Swamp)	NSW114	NSS	200	B6	1, 3
Murrumbidgee Catchment Management Authority					
Lowbidgee Floodplain	NSW021	MDD	200000	B1, B2, B4, B6, B9, B10, B13, B14, C1, C7	1, 2, 3, 4, 5
Tomneys Plain	NSW041	NSS	90	B15	1
Black Swamp and Coopers Swamp	NSW042	RIV	350	B10, B13, B14	1, 3, 5
Lower Mirrool Creek Floodplain	NSW050	RIV	-	B2, B4, B6, B10	1, 2 ,3, 5
Mid Murrumbidgee Wetlands	NSW052	RIV	-	B1, B2, B4, B6, B9, B10, B14, C1	1, 2, 3, 5
Tuckerbil Swamp	NSW054	RIV	280	B8	4, 5, 6
Big Badja Swamp	NSW063	SEH	106	B4, B15	1, 5, 6
Coopers Swamp	NSW064	SEH	18	B15	1, 3
Lake Bathurst	NSW066	SEH	1350	B6	1, 3, 6
Lake George	NSW067	SEH	15000	B6	1, 3, 5, 6
Micalong Swamp	NSW068	SEH	526	B15	1, 6
Yaouk Swamp	NSW070	SEH	258	B10, B15	1
Pitt Town Lagoon	NSW087	SB	41	B10	1
Bethungra Dam Reserve	NSW112	NSS	385	C1	3
Doodle Corner Swamp	NSW113	NSS	1700	B14	1
Fivebough Swamp	NSW115	RIV	400	B7	4
Tomneys Plain	NSW131	SEH	90	B15	1
Namoi Catchment Management Authority					
Goran Lake	NSW005	BBS	6385	B6	1, 3, 4
Northern Rivers Catchment Management Authority					
Little Llangothlin Lagoon	NSW022	NET	258	B5, B6, B15	1, 3, 4, 5
Round Mountain Swamps	NSW024	NET	300	B9, B15	1
Bundjalung National Park	NSW026	NNC	17738	A4, A5, A6, A8, A9, A10, A11	1, 3, 5, 6
Clarence River Estuary	NSW027	NNC	1700	A2, A6, A7, A8, A9, A10	1, 2, 3, 4, 5
Clybucca Creek Estuary	NSW028	NNC	1817	A2, A6, A7, A8, A9	1, 3, 6
Crowdy Bay National Park	NSW029	NNC	9519	A4, A5, A9, A11, A12	1, 3, 5, 6
Everlasting Swamp	NSW030	NNC	1930	A11, A12	1, 3
Lake Hiawatha and Minnie Water	NSW031	NNC	367	A11	1, 3, 5

Limeburners Creek Nature Reserve	NSW032	NNC	9123	A4, A5, A6, A8, A9, A10, A11	1, 2, 5, 6
Swan Pool / Belmore Swamp	NSW035	NNC	6350	A11, A12	1, 3
The Broadwater	NSW036	NNC	2800	A2, A6, A7, A9, A11, A12	1, 3, 5
Upper Coldstream	NSW037	NNC	1995	B4, B5, B9, B10	1, 3
Wooloweyah Lagoon	NSW039	NNC	2390	A2, A6, A7, A8, A9	1, 3, 5
Billinudgel Nature Reserve	NSW105	NNC	713	A12	1, 3
Cowans Pond Reserve	NSW107	NNC	5	B9	3
Cudgen Nature Reserve	NSW108	NNC	614	A9	1, 2, 3, 5
Stotts Island Nature Reserve	NSW110	NNC	142	A12	1, 5
Ukerebagh Nature Reserve	NSW111	NNC	125	A6, A7, A9	1, 2, 3, 4, 5, 6
Cook Island Nature Reserve	NSW106	NNC	5	A4	1, 3
Solitary Islands Marine Park	NSW109	NNC	100000	A1, A2, A3, A4, A5, A6, A7, A8	1, 5, 6
Southern Rivers Catchment Management Authority					
Blue Lake (Kosciuszko)	NSW001	AA	14	B5, B16	1, 4, 5
Kosciuszko Alpine Fens, Bogs and Lakes	NSW002	AA	30	B2, B5, B9, B10, B15, B16	1, 4, 5
Rennex Gap	NSW003	AA	45	B15	1, 3
Snowgum Flat	NSW004	AA	1	B15	1
Clyde River Estuary	NSW059	SEC	2900	A2, A6, A7, A8, A9	1, 3, 5
Cullendulla Creek and Embayment	NSW060	SEC	220	A2, A6, A7, A8, A9	1, 6
Merimbula Lake	NSW061	SEC	450	A2, A6, A7, A8, A9	1
Bega Swamp	NSW062	SEH	23	B15	1, 6
Jacksons Bog	NSW065	SEH	150	B15	1, 6
Monaro Lakes	NSW069	SEH	215	B9, B10, B15	1, 2, 5
Budderoo National Park and Barren Grounds Nature Reserve Heath swamps	NSW075	SB	1150	B13, B15	1, 2, 5
Coomonderry Swamp	NSW076	SB	670	A11, A12	1, 3, 4
Jervis Bay[4]	NSW078	SB	41044	A2, A6, A7, A8, A9, B2, B7	1, 3, 4, 5 6
Killalea Lagoon	NSW079	SB	20	A11	1, 3
Lake Illawarra	NSW081	SB	3227	A10	1, 3, 5
Long, Hanging Rock, Mundego & Stingray Swamps (Paddys River Swamps)	NSW082	SB	88	B15	1, 3, 5
Minnamurra River Estuary	NSW084	SB	200	A2, A6, A7, A8, A9, A10, A11	1, 5
Shoalhaven / Crookhaven Estuary	NSW088	SB	2500	A2, A5, A6, A7, A8, A9	1, 3, 4, 5
St. Georges Basin	NSW090	SB	4400	A2, A6, A7, A8, A9	1, 3
Wollumboola Lake	NSW094	SB	850	A2, A8, A9, A10	1, 2, 3, 5, 6
Bondi Lake	NSW116	SEC	50	A11	1, 6
Coila Creek Delta	NSW117	SEC	40	A7, A8, A10	1, 4
Durras Lake	NSW118	SEC	400	A2, A10	1, 6
Moruya River Estuary Saltmarshes	NSW119	SEC	50	A8	1, 2
Nargal Lake	NSW120	SEC	25	A11	1, 3
Nelson Lagoon	NSW121	SEC	200	A8, A10	1
Pambula Estuarine Wetlands	NSW122	SEC	200	A6	2, 3, 5, 6
Tuross River Estuary	NSW123	SEC	1200	A6	1, 2, 5

Twofold Bay	NSW124	SEC	850	A1, A6, A10	1, 3, 5, 6
Waldrons Swamp	NSW125	SEC	225	A10	1, 3
Wallaga Lake	NSW126	SEC	950	A2, A5, A6	5, 6
Wallagoot Lagoon (Wallagoot Lake)	NSW127	SEC	360	A2, A5, A6	5, 6
Coree Flats	NSW128	SEH	40	B10, B15	1
Nunnock Swamp	NSW129	SEH	100	B2, B9, B13, B15	1, 2, 3, 5
Packers Swamp	NSW130	SEH	40	B2, B9, B15	1, 2
Coomaditchy Lagoon	NSW135	SB	4	A11	1, 3, 6
Five Islands Nature Reserve	NSW137	SB	1	A4	1, 3
Jervis Bay Sea Cliffs[4]	NSW139	SB	175	A4	1, 2, 6
Swan Lagoon	NSW140	SB	6	A10	3, 6
Tabourie Lake	NSW171	SB	285	A8, A9, A10, A12, B10, B13	1,2,3
Cormorant Beach	NSW172	SB	12	A11, A12, B9, B13	1
Lagoon Head	NSW173	SB	6	A10, A11, A12, B10, B13	1
Lake Termeil Wetland Complex	NSW174	SB	71	A8, A9, A11, A12, B13	1,2,3
Meroo Lake Wetland Complex	NSW175	SB	176	A8, A9, A12, B13	1,2,3
Sydney Metro Catchment Management Authority					
Bicentennial Park	NSW071	SB	56	A6, A7, A8	1, 2, 3, 5
Botany Wetlands[4]	NSW073	SB	64	B5, B13	1, 6
Eve St. Marsh, Arncliffe	NSW077	SB	2	A7, A8	3, 6
Newington Wetlands	NSW085	SB	71	A8, B1, B11	1, 2, 6
O'Hares Creek Catchment	NSW086	SB	9000	B9, B10, B13, B15	1, 3, 5, 6
Towra Point Estuarine Wetlands	NSW092	SB	1161	A2, A5, A6, A7, A8, A9	1, 3, 4, 5, 6
Voyager Point	NSW142	SB	50	A6, A7, A9, A11, A12	1,5
Beecroft Peninsula[4]	NSW176	SB	4044	A8, A9, B2, B7	1, 3, 6
Liverpool Military Training Area[4]	NSW177	SB	15000	B1, B3, B4, B9	1, 5
Western Catchment Management Authority					
Bulloo Overflow / Carypundy Swamp	NSW006	CHC	178560	B2, B4, B6, B10, B13, B14	1, 3, 4
Salisbury Lake (Lake Altibouka)	NSW007	CHC	565	B8	1, 5
Narran Lakes	NSW011	DRP	30000	B2, B4, B6, B10, B13, B14	1, 2, 3, 4, 6
Talyawalka Anabranch & Teryawynia Creek	NSW012	DRP	-	B2, B4, B6, B10, B12, B13, B14	1, 4
Green Creek Swamp	NSW013	ML	-	B10, B13, B14	1, 3, 4
Lake Burkanoko	NSW014	ML	271	B8	1
Lake Nichebulka	NSW015	ML	348	B8	1
Murphys Lake	NSW016	ML	1000	B8	1, 3
Paroo River Distributary Channels	NSW017	ML	720000	B2, B4, B6, B8, B10, B12, B13, B14	1, 3, 5
Willeroo Lake	NSW018	ML	113	B10, B14	1, 3
Yantabulla Swamp (Cuttaburra Basin)	NSW019	ML	37200	B2, B10, B13, B14	1, 3, 4, 5
Sturt National Park Wetlands	NSW057	SSD	-	B8, B10, B13, B14	1, 3, 5
The Salt Lake	NSW058	SSD	5816	B8	1
Blue Lake (Paroo)	NSW096	ML	237	B13	2, 3, 5
Gilpoko Lake	NSW097	ML	436	B6	1, 3, 4, 5
Great Artesian Basin Springs	NSW098	ML & DRP	-	B17	1, 2, 3, 4

Green Lake	NSW099	ML	392	B13	2, 3, 5
Mullawoolka Basin	NSW100	ML	2026	B6	1, 2, 3, 5
Peery Lake (Peri Lake)	NSW101	ML	5026	B6, B17	1, 2, 3, 4, 5, 6
Poloko Lake (Olepoloko Lake)	NSW102	ML	3722	B6	1, 2, 3, 5
Tongo Lake	NSW103	ML	524	B13	1, 2, 3, 5
Yantabangee Lake	NSW104	ML	1427	B6	1, 2, 3, 5
Blue Lake (overflow)	NSW144	ML	307	B5	1, 2, 3, 5
Budtha Waterhole	NSW145	ML	124	B6	1, 2, 5
Calbocaro Billabong	NSW146	ML	66	B6	1, 2, 5
Camel Lake	NSW147	ML	126	B5	1, 2, 5
Coona Coona Lake	NSW148	ML	75	B6	1, 2
Deadmans Swamp	NSW149	ML	471	B6	1, 2, 5
Dick Lake	NSW150	ML	708	B5	1, 2, 5
Dry Lake	NSW151	ML	87	B5	1, 2, 3, 5
Gidgee Lake	NSW152	ML	81	B7	1, 2, 3
Gypsum Swamp	NSW153	ML	82	B6	1, 2
Horseshoe Lake	NSW154	ML	90	B6	1, 2
Horseshoe Lake (Bartons Ck)	NSW155	ML	513	B7	1, 2
Pelora Lake	NSW156	ML	50	B6	1, 2
Pirillie Lake	NSW157	ML	129	B6	1, 2, 5
Taylors Lake	NSW158	ML	46	B7	1, 2
Tenannia Waterhole	NSW159	ML	624	B6	1, 2, 3
Waitchie Lake	NSW160	ML	205	B5	1, 2, 3
Wirrania Swamp	NSW161	ML	86	B6	1, 2
Yammaramie Swamp	NSW162	ML	3082	B6	1, 2, 3
Birdsnest Swamp	NSW163	ML	117	B6	1, 2, 5
Bottom Lila Lake	NSW164	ML	286	B5	1, 2, 5
Lake Yandaroo	NSW165	ML	33	B7	1, 3
Racecourse Swamp	NSW166	ML	358	B6	1, 2
The Dry Lake	NSW167	ML	133	B6	1, 2, 3
Toms Lake	NSW168	ML	239	B6	1, 2
Yarran Swamp	NSW169	ML	89	B6	1, 2
Culgoa River Floodplain	NSW170	DRP	22986	B2, B10, B14	1, 4, 5

Note: area figures for the above tables are approximate only and are not available for all wetlands.

[1] See Table 2: Interim Biogeographic Regionalisation for Australia Codes
[2] See Table 3: Nationally Important Wetland types
[3] See Table 4: Nationally Important Wetland selection criterion
[4] Wetlands occurring in part on land owned or managed by the Commonwealth (six sites)

Table 2: Interim Biogeographic Regionalisation for Australia Codes

IBRA Code	
AA	Australian Alps
BBS	Brigalow Belt South
BHC	Broken Hill Complex
CHC	Channel Country
CP	Cobar Peneplain
DRP	Darling Riverine Plains
MDD	Murray Darling Depression
ML	Mulga Lands
NAN	Nandewar
NET	New England Tableland
NNC	NSW North Coast

NSS	NSW South Western Slopes
RIV	Riverina
SB	Sydney Basin
SEC	South East Corner
SEH	South Eastern Highlands
SSD	Simpson Strzelecki Dunefields

Table 3: Nationally Important Wetland types

A – Marine and Coastal Zone wetlands

1. Marine waters-permanent shallow waters less than six metres deep at low tide; includes sea bays, straits
2. Subtidal aquatic beds; includes kelp beds, seagrasses, tropical marine meadows
3. Coral reefs
4. Rocky marine shores; includes rocky offshore islands, sea cliffs
5. Sand, shingle or pebble beaches; includes sand bars, spits, sandy islets
6. Estuarine waters; permanent waters of estuaries and estuarine systems of deltas
7. Intertidal mud, sand or salt flats
8. Intertidal marshes; includes saltmarshes, salt meadows, saltings, raised salt marshes, tidal brackish and freshwater marshes
9. Intertidal forested wetlands; includes mangrove swamps, nipa swamps, tidal freshwater swamp forests
10. Brackish to saline lagoons and marshes with one or more relatively narrow connections with the sea
11. Freshwater lagoons and marshes in the coastal zone
12. Non-tidal freshwater forested wetlands

B – Inland wetlands

1. Permanent rivers and streams; includes waterfalls
2. Seasonal and irregular rivers and streams
3. Inland deltas (permanent)
4. Riverine floodplains; includes river flats, flooded river basins, seasonally flooded grassland, savanna and palm savanna
5. Permanent freshwater lakes (> 8 ha); includes large oxbow lakes
6. Seasonal/intermittent freshwater lakes (> 8 ha), floodplain lakes
7. Permanent saline/brackish lakes
8. Seasonal/intermittent saline lakes
9. Permanent freshwater ponds (< 8 ha), marshes and swamps on inorganic soils; with emergent vegetation waterlogged for at least most of the growing season
10. Seasonal/intermittent freshwater ponds and marshes on inorganic soils; includes sloughs, potholes; seasonally flooded meadows, sedge marshes
11. Permanent saline/brackish marshes
12. Seasonal saline marshes
13. Shrub swamps; shrub-dominated freshwater marsh, shrub carr, alder thicket on inorganic soils
14. Freshwater swamp forest; seasonally flooded forest, wooded swamps; on inorganic soils
15. Peatlands; forest, shrub or open bogs
16. Alpine and tundra wetlands; includes alpine meadows, tundra pools, temporary waters from snow melt
17. Freshwater springs, oases and rock pools
18. Geothermal wetlands
19. Inland, subterranean karst wetlands

C – Human-made wetlands

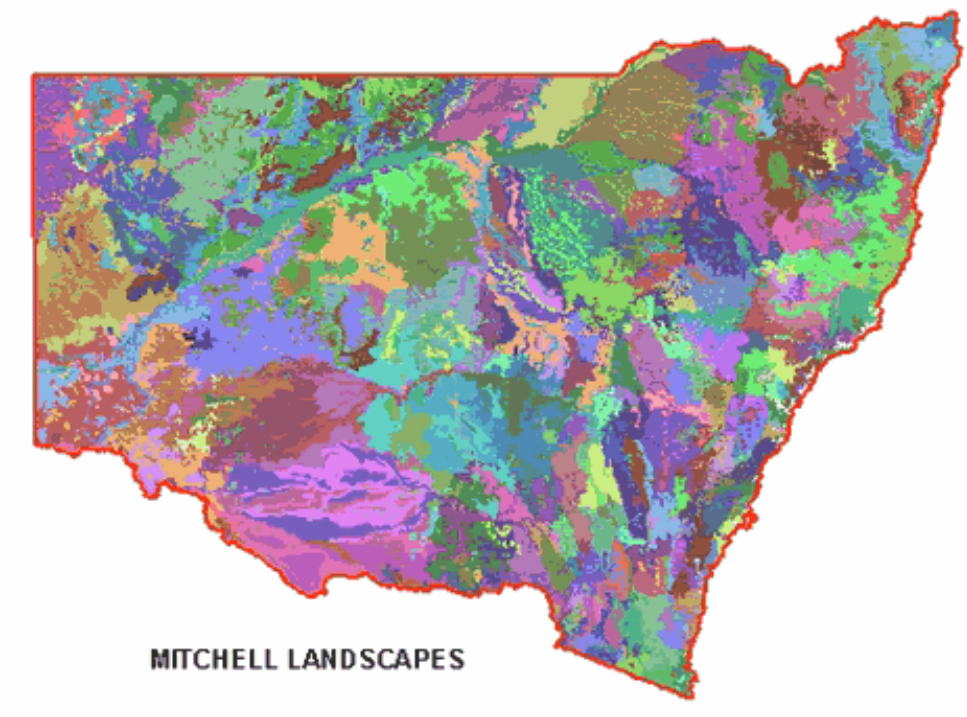
1. Water storage areas; reservoirs, barrages, hydro-electric dams, impoundments (generally > 8 ha)
2. Ponds, including farm ponds, stock ponds, small tanks (generally < 8 ha)
3. Aquaculture ponds; fish ponds, shrimp ponds
4. Salt exploitation; salt pans, salines
5. Excavations; gravel pits, borrow pits, mining pools
6. Wastewater treatment; sewage farms, settling ponds, oxidation basins
7. Irrigated land and irrigation channels; rice fields, canals, ditches
8. Seasonally flooded arable land, farm land
9. Canals

Table 4: Nationally Important Wetland selection criterion

1. It is a good example of a wetland type occurring within a biogeographic region in Australia.
2. It is a wetland which plays an important ecological or hydrological role in the natural functioning of a major wetland system/complex.
3. It is a wetland which is important as the habitat for animal taxa at a vulnerable stage in their life cycles, or provides a refuge when adverse conditions such as drought prevail.
4. The wetland supports 1% or more of the national populations of any native plant or animal taxa.
5. The wetland supports native plant or animal taxa or communities which are considered endangered or vulnerable at the national level.
6. The wetland is of outstanding historical or cultural significance.

Appendix C Percent of each vegetation unit within Mitchell Landscapes

Map of Mitchell Landscapes in NSW



Percent of each vegetation unit within a Michell Landscape

CMA	Mitchell landscape	%cleared
Border Rivers/Gwydir	Ashford Karst	83
Border Rivers/Gwydir	Ashford Mole Valleys	66
Border Rivers/Gwydir	Barwon Aeolian Sands	0
Border Rivers/Gwydir	Barwon Alluvial Plains	14
Border Rivers/Gwydir	Barwon Channels and Floodplains	22
Border Rivers/Gwydir	Bebo Ranges and Slopes	38
Border Rivers/Gwydir	Belata Sands	89
Border Rivers/Gwydir	Bundarra Valley	78
Border Rivers/Gwydir	Collarenebri Tablelands and Downs	22
Border Rivers/Gwydir	Croppa Clay Plains	85
Border Rivers/Gwydir	Croppa Creek Channels and Floodplains	79
Border Rivers/Gwydir	Dingo Spur Meta-sediments	39
Border Rivers/Gwydir	Dumaresq Channels	90
Border Rivers/Gwydir	Dumaresq Gorges	30
Border Rivers/Gwydir	Glenn Innes - Guyra Basalts	84
Border Rivers/Gwydir	Guyra Lagoons and Swamps	60
Border Rivers/Gwydir	Guyra Tops Granite	54
Border Rivers/Gwydir	Gwydir Alluvial Plains	46
Border Rivers/Gwydir	Gwydir Channels and Floodplains	52
Border Rivers/Gwydir	Gwydir Swamps and Lagoons	22
Border Rivers/Gwydir	Inverell Basalts	82
Border Rivers/Gwydir	Inverell Plateau Granites	40
Border Rivers/Gwydir	Inverell Plateau Slopes	83
Border Rivers/Gwydir	Kaputar Hill Crest Flows and Sands	67
Border Rivers/Gwydir	Kaputar Slopes	42
Border Rivers/Gwydir	Kaputar Tops	28

Border Rivers/Gwydir	Macintyre Aeolian Sands	4
Border Rivers/Gwydir	Macintyre Alluvial Plains	55
Border Rivers/Gwydir	Macintyre Swamps and Lagoons	57
Border Rivers/Gwydir	Mole Valley	70
Border Rivers/Gwydir	Moonbi - Walcha Granites	53
Border Rivers/Gwydir	Niangala Plateau and Slopes	67
Border Rivers/Gwydir	Split Yard Plateau	51
Border Rivers/Gwydir	Strathmore Sandstones	53
Border Rivers/Gwydir	Tamworth - Keepit Slopes and Plains	71
Border Rivers/Gwydir	Upper Gwydir Channels and Floodplain	62
Border Rivers/Gwydir	Uralla Basalts and Sands	93
Border Rivers/Gwydir	Woods Reef Serpentinite	37
Border Rivers/Gwydir	Yallaroi Basalts	85
Central West	Barradine Alluvial Plains	33
Central West	Barwon Alluvial Plains	14
Central West	Barwon Channels and Floodplains	22
Central West	Bathurst Granites	80
Central West	Belmont Hills	72
Central West	Bimbi Plains	93
Central West	Black Range	35
Central West	Bodangora Granites	93
Central West	Bogan Alluvial Plains	57
Central West	Bogan Channels and Floodplains	29
Central West	Bogan Swamps and Lagoons	72
Central West	Boggy Cowal Alluvial Plains	88
Central West	Boggy Cowal Channels and Floodplains	77
Central West	Boggy Cowal Swamps and Lagoons	86
Central West	Boona Mountains	50
Central West	Bugaldie Uplands	28
Central West	Bugwah Alluvial Plains	76
Central West	Bugwah Channels and Floodplains	81
Central West	Bugwah Swamps and Lagoons	77
Central West	Burroway Plains	82
Central West	Byng Ultramafics	82
Central West	Canbellego - Boppy Hills	0
Central West	Canobolas Peaks	27
Central West	Canobolas Sheet Basalts	92
Central West	Capertee Plateau	58
Central West	Capertee Slopes	34
Central West	Carcour Intrusives	95
Central West	Cassilis Slopes	65
Central West	Castlereagh Alluvial Plains	80
Central West	Castlereagh Channels and Floodplains	69
Central West	Castlereagh Swamps	43
Central West	Cherry Tree Plateau	64
Central West	Cobar Downs	14
Central West	Cobar Granite Downs	6
Central West	Cobar Isolated Hills	4
Central West	Cobar Plains	4
Central West	Cobar Tablelands	19
Central West	Coolah Tops	61
Central West	Cope Hills Granite	83
Central West	Cubbo Uplands	13
Central West	Cudgegong Channels and Floodplains	94
Central West	Culgoa - Narran Channels and Floodplains	2
Central West	Dubbo Basalts	97
Central West	Fifield Intrusives	77
Central West	Ganantagi Mountain and Footslopes	67
Central West	Geurie Granites	63
Central West	Goonoo Slopes	67

Central West	Goonumbla Hills	94
Central West	Goulburn River Gorges	19
Central West	Gulgong Ranges	71
Central West	Gumble Hills	69
Central West	Harvey Ranges and Slopes	52
Central West	Jemalong Range and Slopes	76
Central West	Jenolan - Wombeyan Karst	73
Central West	Leadley Hills	77
Central West	Lightning Ridge Tablelands and Downs	8
Central West	Liverpool Range Valleys and Footslopes	80
Central West	Liverpool Tops	20
Central West	Macquarie - Turon Gorges	68
Central West	Macquarie Alluvial Plains	60
Central West	Macquarie Channels and Floodplains	59
Central West	Macquarie Marshes	12
Central West	Macquarie Valley Basalts	70
Central West	Mandurama Slopes	60
Central West	Marra Alluvial Plains	32
Central West	Marra Swamps and Lagoons	17
Central West	Marron Hills	80
Central West	Merrygoen Hills and Slopes	66
Central West	Merulya Alluvial Plains	82
Central West	Mid-Darling Channels and Floodplains	8
Central West	Mid-Darling Plains	1
Central West	Mollyan Hills	65
Central West	Molong Ridges	82
Central West	Mount David Basalts	77
Central West	Mount Foster	0
Central West	Mount Horrible Plateau	51
Central West	Mullion Slopes	92
Central West	Myall Glen Basalts	100
Central West	Nangar Slopes and Ranges	80
Central West	Nangarybone Hills	24
Central West	Narromine Hills	87
Central West	Newnes Plateau	9
Central West	Nombi Plateau and Pinnacles	63
Central West	Nymagee Downs	30
Central West	Nymagee Granite Downs	35
Central West	Nymagee Incised Streams	67
Central West	Nymagee Isolated Bedrock Hills	18
Central West	Nymagee Ranges	5
Central West	Nymagee Sandplains	37
Central West	Oberon - Kialla Granites	96
Central West	Old Harbour Lagoon	100
Central West	Ophir - Hargraves Plateau	67
Central West	Oxley Range	7
Central West	Pangee Alluvial Plains	73
Central West	Paroo - Warrego Channels and Floodouts	1
Central West	Purlewaugh Plains	66
Central West	Rockley Plains	62
Central West	Shooters Hill	77
Central West	Sydney Basin Basalt Caps	38
Central West	Sydney Basin Diatremes	27
Central West	Sydney Basin Western Escarpment	32
Central West	Talbragar - Upper Macquarie Terrace Sand	93
Central West	Teriderie Alluvial Plains	71
Central West	Teriderie Channels and Floodplains	67
Central West	Tottenham Hills	59
Central West	Trangie Terrace	93

Central West	Trinkey Plateau	37
Central West	Tullamore Hills	75
Central West	Upper Castlereagh Alluvial Plains	86
Central West	Upper Castlereagh Channels and Floodplai	89
Central West	Upper Darling Isolated Hills	4
Central West	Upper Macquarie Channels and Floodplains	100
Central West	Warrumbungle Slopes	46
Central West	Warrumbungle Tops	2
Central West	Water	63
Central West	Wellington - Molong Karst	93
Central West	Wollemi Ranges	7
Hawkesbury Nepean	Bathurst Granites	80
Hawkesbury Nepean	Belrose Coastal Slopes	59
Hawkesbury Nepean	Bilpin Ridges	4
Hawkesbury Nepean	Blaxlands Ridge	25
Hawkesbury Nepean	Blue Mountains Plateau	8
Hawkesbury Nepean	Boyd Plateau	0
Hawkesbury Nepean	Boyd Plateau Granites	0
Hawkesbury Nepean	Breadalbane Swamps and Lagoons	96
Hawkesbury Nepean	Bucketty Ridges	6
Hawkesbury Nepean	Bulli Coastal Escarpment	23
Hawkesbury Nepean	Bungonia Tableland and Gorge	37
Hawkesbury Nepean	Burragorang Valley and Gorges	8
Hawkesbury Nepean	Capertee Plateau	58
Hawkesbury Nepean	Capertee Slopes	34
Hawkesbury Nepean	Cherry Tree Plateau	64
Hawkesbury Nepean	Colo River Gorges	2
Hawkesbury Nepean	Crookwell Basalts and Sands	94
Hawkesbury Nepean	Cumberland Plain	91
Hawkesbury Nepean	Darkes Forest Sands	0
Hawkesbury Nepean	Erskine Creek Gorge	0
Hawkesbury Nepean	Fitzroy Falls Plateau	39
Hawkesbury Nepean	Gosford - Cooranbong Coastal Slopes	36
Hawkesbury Nepean	Grose River Gorge	0
Hawkesbury Nepean	Gundary Plains	78
Hawkesbury Nepean	Hawkesbury - Nepean Channels and Floodpl	74
Hawkesbury Nepean	Hawkesbury - Nepean Terrace Gravels	80
Hawkesbury Nepean	Hawkesbury Gorge	26
Hawkesbury Nepean	Hornsby Plateau	20
Hawkesbury Nepean	Howes Range	2
Hawkesbury Nepean	Jenolan - Wombeyan Karst	73
Hawkesbury Nepean	Kurrajong Fault Scarp	38
Hawkesbury Nepean	Lake George Complex	89
Hawkesbury Nepean	Lapstone Slopes	6
Hawkesbury Nepean	MacDonald Channel and Floodplain	41
Hawkesbury Nepean	MacDonald Ranges	3
Hawkesbury Nepean	Mangrove Creek Valley	8
Hawkesbury Nepean	Maroota Sands	57
Hawkesbury Nepean	Mellong Range	4
Hawkesbury Nepean	Moss Vale Highlands	59
Hawkesbury Nepean	Mount David Basalts	77
Hawkesbury Nepean	Mount Horrible Plateau	51
Hawkesbury Nepean	Nattai Plateau	13
Hawkesbury Nepean	Newnes Plateau	9
Hawkesbury Nepean	Oberon - Kialla Granites	96
Hawkesbury Nepean	Pennant Hills Ridges	74
Hawkesbury Nepean	Picton - Razorback Hills	55
Hawkesbury Nepean	Port Jackson Basin	88

Hawkesbury Nepean	Putty Sands	1
Hawkesbury Nepean	Robertson Basalts	74
Hawkesbury Nepean	Rockley Plains	62
Hawkesbury Nepean	Scotts Main Range	0
Hawkesbury Nepean	Shooters Hill	77
Hawkesbury Nepean	Silverdale Slopes	25
Hawkesbury Nepean	Somersby Plateau	36
Hawkesbury Nepean	Sydney - Newcastle Coastal Alluvial Plai	59
Hawkesbury Nepean	Sydney Basin Basalt Caps	38
Hawkesbury Nepean	Sydney Basin Diatremes	27
Hawkesbury Nepean	Sydney Basin Western Escarpment	32
Hawkesbury Nepean	Towrang Ranges	74
Hawkesbury Nepean	Upper MacDonald Valleys	1
Hawkesbury Nepean	Upper Nepean Gorges	53
Hawkesbury Nepean	Watagan Ranges	11
Hawkesbury Nepean	Water	63
Hawkesbury Nepean	Wingecarribee Swamp	100
Hawkesbury Nepean	Wollemi Ranges	7
Hawkesbury Nepean	Wollondilly - Bindook Tablelands and Gor	34
Hawkesbury Nepean	Wollondilly Channel and Floodplain	0
Hawkesbury Nepean	Wollongambee Plateau	0
Hawkesbury Nepean	Woronora Plateau	17
Hawkesbury Nepean	Yengo Plateau	2
Hunter Central Rivers	Apsley Meta-sediments	24
Hunter Central Rivers	Barrington Tops Basalt	17
Hunter Central Rivers	Barrington Tops Granite	3
Hunter Central Rivers	Barrington Tops Meta-sediments	11
Hunter Central Rivers	Breeza Hills Sandstone-Shale Slopes	32
Hunter Central Rivers	Brothers Peaks	20
Hunter Central Rivers	Bucketty Ridges	6
Hunter Central Rivers	Bulga Plateau	40
Hunter Central Rivers	Capertee Plateau	58
Hunter Central Rivers	Cassilis Slopes	65
Hunter Central Rivers	Central Hunter Alluvial Plains	91
Hunter Central Rivers	Central Hunter Foothills	79
Hunter Central Rivers	Comboyne Plateau	61
Hunter Central Rivers	Cope Hills Granite	83
Hunter Central Rivers	Gosford - Cooranbong Coastal Slopes	36
Hunter Central Rivers	Goulburn River Channels and Floodplains	71
Hunter Central Rivers	Goulburn River Gorges	19
Hunter Central Rivers	Gulgong Ranges	71
Hunter Central Rivers	Howes Range	2
Hunter Central Rivers	Hunter River Basalts	100
Hunter Central Rivers	Lees Pinch Foothills	28
Hunter Central Rivers	Liverpool Range Valleys and Footslopes	80
Hunter Central Rivers	Liverpool Tops	20
Hunter Central Rivers	Lower Hunter Channels and Floodplains	93
Hunter Central Rivers	Mangrove Creek Valley	8
Hunter Central Rivers	Manning - Macleay Barriers and Beaches	35
Hunter Central Rivers	Manning - Macleay Channels and Floodplai	89
Hunter Central Rivers	Manning - Macleay Coastal Alluvial Plain	64
Hunter Central Rivers	Manning Great Escarpment Southern Aspect	26
Hunter Central Rivers	Manning Great Escarpment Western Aspects	58
Hunter Central Rivers	Moonbi - Walcha Granites	53
Hunter Central Rivers	Mount Royal Ridges	46
Hunter Central Rivers	Mount Royal Tops	39
Hunter Central Rivers	Myall - Forster Barrier System	35
Hunter Central Rivers	Myall River Channel and Floodplains	65

Hunter Central Rivers	Newcastle Coastal Ramp	57
Hunter Central Rivers	Niangala Plateau and Slopes	67
Hunter Central Rivers	Nowendoc - Yarras Serpentinite	48
Hunter Central Rivers	Port Macquarie Coastal Ramp	53
Hunter Central Rivers	Scone - Gloucester Foothills	76
Hunter Central Rivers	Slippery Rock Range	48
Hunter Central Rivers	Somersby Plateau	36
Hunter Central Rivers	Stroud Mountains	42
Hunter Central Rivers	Sydney - Newcastle Barriers and Beaches	74
Hunter Central Rivers	Sydney - Newcastle Coastal Alluvial Plai	59
Hunter Central Rivers	Sydney Basin Basalt Caps	38
Hunter Central Rivers	Sydney Basin Diatremes	27
Hunter Central Rivers	Talbragar - Upper Macquarie Terrace Sand	93
Hunter Central Rivers	Tia Tops	79
Hunter Central Rivers	Upper Goulburn Valleys and Escarpment	48
Hunter Central Rivers	Upper Hunter Channels and Floodplain	97
Hunter Central Rivers	Watagan Ranges	11
Hunter Central Rivers	Water	63
Hunter Central Rivers	Wauchope Coastal Foothills	47
Hunter Central Rivers	Werris Creek Basalt Hills and Valleys	85
Hunter Central Rivers	Wollemi Ranges	7
Hunter Central Rivers	Yarrowitch Basalt Plateau	51
Hunter Central Rivers	Yengo Plateau	2
Lachlan	Ardlethan Hills	90
Lachlan	Bathurst Granites	80
Lachlan	Belmont Hills	72
Lachlan	Bimbi Plains	93
Lachlan	Black Range	35
Lachlan	Bogan Alluvial Plains	57
Lachlan	Boona Mountains	50
Lachlan	Boorowa Volcanics	88
Lachlan	Boyd Plateau Granites	0
Lachlan	Breadalbane Swamps and Lagoons	96
Lachlan	Buckambool - Jackermaroo Hills	5
Lachlan	Burgooney Plains	94
Lachlan	Byng Ultramafics	82
Lachlan	Calarie Plains	95
Lachlan	Canobolas Peaks	27
Lachlan	Canobolas Sheet Basalts	92
Lachlan	Canobolas Slopes	93
Lachlan	Carcour Intrusives	95
Lachlan	Cocoparra Ranges and Footslopes	68
Lachlan	Cootamundra - Tumut Serpentinite and Ult	83
Lachlan	Cowal Lakes	25
Lachlan	Crookwell Basalts and Sands	94
Lachlan	Curriba Basalt Hills	94
Lachlan	Dalton Hills	72
Lachlan	Eugowra Plains	92
Lachlan	Fifield Intrusives	77
Lachlan	Frampton Hills	81
Lachlan	Ganantagi Mountain and Footslopes	67
Lachlan	Gilgunnia - Broken Ranges	0
Lachlan	Goobothery Hills and Footslopes	67
Lachlan	Goonumbla Hills	94
Lachlan	Gumble Hills	69
Lachlan	Gundary Plains	78
Lachlan	Gunning Hills	82
Lachlan	Gunningbland Range and Slopes	74
Lachlan	Harvey Ranges and Slopes	52

Lachlan	Hillston Sandplains	48
Lachlan	Ivanhoe - Nangara Dunes	2
Lachlan	Ivanhoe - Nangara Fresh Lakes and Swamps	0
Lachlan	Ivanhoe - Nangara Linear Dunes	0
Lachlan	Ivanhoe - Nangara Sandplains	1
Lachlan	Jemalong Range and Slopes	76
Lachlan	Jenolan - Wombeyan Karst	73
Lachlan	Lachlan - Bland Channels and Floodplains	86
Lachlan	Lachlan Channels and Floodplains	12
Lachlan	Lachlan Depression Plains	8
Lachlan	Lachlan Gorge	25
Lachlan	Lachlan Lakes	80
Lachlan	Lachlan Sandplains	18
Lachlan	Lachlan Scalded Plains	0
Lachlan	Lachlan Terrace Gravels	66
Lachlan	Leadley Hills	77
Lachlan	Macquarie Alluvial Plains	60
Lachlan	Mandurama Slopes	60
Lachlan	Manitoba Hills and Footslopes	93
Lachlan	Manna Hills and Footslopes	75
Lachlan	Marilba Range	85
Lachlan	Merulya Alluvial Plains	82
Lachlan	Molong Ridges	82
Lachlan	Mount David Basalts	77
Lachlan	Mullion Slopes	92
Lachlan	Mungo - Marona Lakes and Swamps	0
Lachlan	Mungo - Marona Relic Lakes	1
Lachlan	Mungo - Marona Sandplains	1
Lachlan	Mungo Lakes Complex	0
Lachlan	Murrumbidgee - Tarcutta Channels and Flo	91
Lachlan	Murrumbidgee Channels and Floodplains	21
Lachlan	Murrumbidgee Lakes	68
Lachlan	Murrumbidgee Scalded Plains	24
Lachlan	Nangar Slopes and Ranges	80
Lachlan	Nangarybone Hills	24
Lachlan	Nymagee Downs	30
Lachlan	Nymagee Granite Downs	35
Lachlan	Nymagee Isolated Bedrock Hills	18
Lachlan	Nymagee Linear Dunes	8
Lachlan	Nymagee Ranges	5
Lachlan	Nymagee Sandplains	37
Lachlan	Nymagee Wide Valleys	48
Lachlan	Oberon - Kialla Granites	96
Lachlan	Pangee Alluvial Plains	73
Lachlan	Quandong Hills	88
Lachlan	Rockley Plains	62
Lachlan	Scotts Craig Hills	32
Lachlan	Shepherds Hill	53
Lachlan	Shooters Hill	77
Lachlan	Springdale Hills	92
Lachlan	Talabung Mountain	84
Lachlan	Tottenham Hills	59
Lachlan	Tullamore Hills	75
Lachlan	Ulandra - Narrabulla Hills and Slopes	65
Lachlan	Upper Lachlan Channels and Floodplains	94
Lachlan	Waranary - Yathong Ranges	1
Lachlan	Warraderry Range	72
Lachlan	Warrumba Range and Slopes	33
Lachlan	Water	63

Lachlan	Weddin Range and Slopes	73
Lachlan	Wellington - Molong Karst	93
Lachlan	Woodstock Basalts	98
Lachlan	Wyangla Hills	76
Lachlan	Young Hills and Slopes	86
Lower Darling	Barrier Alluvial Plains	0
Lower Darling	Barrier Downs	0
Lower Darling	Barrier Ranges	0
Lower Darling	Barrier Salt Lakes and Playas	0
Lower Darling	Barrier Sandplains	0
Lower Darling	Ivanhoe - Nangara Isolated Hills	0
Lower Darling	Ivanhoe - Nangara Linear Dunes	0
Lower Darling	Ivanhoe - Nangara Relic Lakes	0
Lower Darling	Ivanhoe - Nangara Sandplains	1
Lower Darling	Lachlan Channels and Floodplains	12
Lower Darling	Lachlan Depression Plains	8
Lower Darling	Lachlan Lakes	80
Lower Darling	Lachlan Sandplains	18
Lower Darling	Lachlan Scalded Plains	0
Lower Darling	Lower Darling Alluvial Plains	0
Lower Darling	Lower Darling Channels and Floodplains	1
Lower Darling	Lower Darling Fresh Lakes and Swamps	30
Lower Darling	Mallee Cliffs Dunes	0
Lower Darling	Mallee Cliffs Linear Dunes	10
Lower Darling	Mallee Cliffs Salt Lakes and Playas	5
Lower Darling	Mallee Cliffs Sandplains	21
Lower Darling	Menindee Sandplains	0
Lower Darling	Mungo - Marona Dunes	0
Lower Darling	Mungo - Marona Lakes and Swamps	0
Lower Darling	Mungo - Marona Linear Dunes	3
Lower Darling	Mungo - Marona Relic Lakes	1
Lower Darling	Mungo - Marona Sandplains	1
Lower Darling	Mungo Lakes Complex	0
Lower Darling	Murray Channels and Floodplains	45
Lower Darling	Murray Lakes	48
Lower Darling	Murrumbidgee Channels and Floodplains	21
Lower Darling	Murrumbidgee Depression Plains	26
Lower Darling	Murrumbidgee Lakes	68
Lower Darling	Murrumbidgee Source-bordering Dunes	27
Lower Darling	Sayers Lake	3
Lower Darling	Scotia Dunes	0
Lower Darling	Scotia Groundwater Basins	0
Lower Darling	Scotia Linear Dunes	1
Lower Darling	Scotia Sandplains	2
Lower Darling	Scropes Salt Lakes and Playas	0
Lower Darling	Scropes Sandplains	0
Murray	Adrah Hills and Ranges	78
Murray	Albury - Oaklands Hills and Footslopes	95
Murray	Alpine Zone	0
Murray	Bringenbrong Ranges	12
Murray	Brokong Plains	87
Murray	Buckingong Gravels	67
Murray	Burrumbuttock Hills and Footslopes	99
Murray	Cabramurra - Kiandra Basalt Caps and San	9
Murray	Chimneys Ridge Montane	11
Murray	Chimneys Ridge Sub-alpine	1
Murray	Cocoparra Ranges and Footslopes	68
Murray	Coffin Rock Granite Hills	91
Murray	Dargals Montane	2

Murray	Geehi Gorge	1
Murray	Jagungal Tops	0
Murray	Khancoban Basin	1
Murray	Kings Cross Montane	5
Murray	Kings Cross Sub-alpine	0
Murray	Lachlan Channels and Floodplains	12
Murray	Lockhart Hills and Footslopes	93
Murray	Main Range Montane	2
Murray	Main Range Sub-alpine	13
Murray	Mallee Cliffs Sandplains	21
Murray	Murray Channels and Floodplains	45
Murray	Murray Depression Plains	87
Murray	Murray Lakes	48
Murray	Murray Scalded Plains	90
Murray	Murray Source-bordering Dunes	75
Murray	Murrumbidgee - Tarcutta Lakes	34
Murray	Murrumbidgee Channels and Floodplains	21
Murray	Murrumbidgee Depression Plains	26
Murray	Murrumbidgee Lakes	68
Murray	Murrumbidgee Scalded Plains	24
Murray	Murrumbidgee Source-bordering Dunes	27
Murray	Table Top Range	83
Murray	Tipperary Hills Granites	70
Murray	Tooma Granite Ranges	48
Murray	Water	63
Murray	Wonga Hills and Ranges	88
Murrumbidgee	Adelong Granite Ranges	83
Murrumbidgee	Adrah Hills and Ranges	78
Murrumbidgee	Alpine Zone	0
Murrumbidgee	Ardlethan Hills	90
Murrumbidgee	Bogong Montane	0
Murrumbidgee	Bogong Sub-alpine	1
Murrumbidgee	Boorowa Volcanics	88
Murrumbidgee	Breadalbane Swamps and Lagoons	96
Murrumbidgee	Brokong Plains	87
Murrumbidgee	Buckingong Gravels	67
Murrumbidgee	Burgooney Plains	94
Murrumbidgee	Burrinjuck Ridges	87
Murrumbidgee	Burrumbuttock Hills and Footslopes	99
Murrumbidgee	Cabramurra - Kiandra Basalt Caps and San	9
Murrumbidgee	Canberra Plains	83
Murrumbidgee	Carabost Hills and Ranges	68
Murrumbidgee	Cocoparra Ranges and Footslopes	68
Murrumbidgee	Coffin Rock Granite Hills	91
Murrumbidgee	Coolangubra - Good Good Plateau	22
Murrumbidgee	Cootamundra - Tumut Serpentinite and Ult	83
Murrumbidgee	Cullarin Range Fault Block	68
Murrumbidgee	Dalton Hills	72
Murrumbidgee	Doura Volcanics	42
Murrumbidgee	Frampton Hills	81
Murrumbidgee	Goobothery Hills and Footslopes	67
Murrumbidgee	Gourock - Tindery Ranges	3
Murrumbidgee	Gourock - Tindery Slopes	16
Murrumbidgee	Gundary Plains	78
Murrumbidgee	Gunning Hills	82
Murrumbidgee	Hillston Sandplains	48
Murrumbidgee	Jagungal Tops	0
Murrumbidgee	Jindabyne Plains	58
Murrumbidgee	Jingera Valley	0

Murrumbidgee	Junee Hills and Slopes	98
Murrumbidgee	Kings Cross Montane	5
Murrumbidgee	Kings Cross Sub-alpine	0
Murrumbidgee	Kybeyan Range	1
Murrumbidgee	Lachlan Channels and Floodplains	12
Murrumbidgee	Lachlan Depression Plains	8
Murrumbidgee	Lachlan Lakes	80
Murrumbidgee	Lachlan Sandplains	18
Murrumbidgee	Lake George Complex	89
Murrumbidgee	Lockhart Hills and Footslopes	93
Murrumbidgee	Main Range Sub-alpine	13
Murrumbidgee	Mallee Cliffs Salt Lakes and Playas	5
Murrumbidgee	Mallee Cliffs Sandplains	21
Murrumbidgee	Manitoba Hills and Footslopes	93
Murrumbidgee	Marilba Range	85
Murrumbidgee	Minjary Hills and Ranges	55
Murrumbidgee	Molonglo Channels and Floodplains	75
Murrumbidgee	Molonglo Ranges	44
Murrumbidgee	Monaro Alluvium	67
Murrumbidgee	Monaro Lakes	86
Murrumbidgee	Monaro Plains Basalts and Sands	66
Murrumbidgee	Monaro Plains Granites	54
Murrumbidgee	Monaro Plains Meta-sediments	64
Murrumbidgee	Mt Bundarbo Basalt Caps	67
Murrumbidgee	Murray Channels and Floodplains	45
Murrumbidgee	Murray Source-bordering Dunes	75
Murrumbidgee	Murrumbidgee - Tarcutta Channels and Flo	91
Murrumbidgee	Murrumbidgee - Tarcutta Lakes	34
Murrumbidgee	Murrumbidgee - Tarcutta Source-bordering	97
Murrumbidgee	Murrumbidgee Channels and Floodplains	21
Murrumbidgee	Murrumbidgee Depression Plains	26
Murrumbidgee	Murrumbidgee Lakes	68
Murrumbidgee	Murrumbidgee Scalded Plains	24
Murrumbidgee	Murrumbidgee Source-bordering Dunes	27
Murrumbidgee	Namadgi Range Alpine	0
Murrumbidgee	Namadgi Range Montane	38
Murrumbidgee	Namadgi Range Sub-alpine	6
Murrumbidgee	Pinbeyan - Ravine Ranges	4
Murrumbidgee	Shepherds Hill	53
Murrumbidgee	Springdale Hills	92
Murrumbidgee	Tantangara High Plains and Peaks	3
Murrumbidgee	Tipperary Hills Granites	70
Murrumbidgee	Tooma Granite Ranges	48
Murrumbidgee	Tumut Channels and Floodplain	87
Murrumbidgee	Ulandra - Narrabulla Hills and Slopes	65
Murrumbidgee	Upper Lachlan Channels and Floodplains	94
Murrumbidgee	Upper Murrumbidgee Channels and Floodpla	88
Murrumbidgee	Upper Murrumbidgee Gorge	73
Murrumbidgee	Upper Murrumbidgee Valley	68
Murrumbidgee	Water	63
Murrumbidgee	Weddin Range and Slopes	73
Murrumbidgee	Wonga Hills and Ranges	88
Murrumbidgee	Yarrangobilly - Cooleman Karst	0
Murrumbidgee	Yass Channels and Floodplain	99
Murrumbidgee	Young Hills and Slopes	86
Namoi	Attunga Karst	77
Namoi	Baldwin Mountains	22
Namoi	Barradine - Coghill Channels and Floodpl	20
Namoi	Barradine Alluvial Plains	33

Namoi	Barwon Alluvial Plains	14
Namoi	Barwon Channels and Floodplains	22
Namoi	Breeza Hills Basalt Caps	9
Namoi	Breeza Hills Sandstone-Shale Slopes	32
Namoi	Bugaldie Uplands	28
Namoi	Bundarra Valley	78
Namoi	Castlereagh Alluvial Plains	80
Namoi	Castlereagh Swamps	43
Namoi	Coghill Alluvial plains	37
Namoi	Coolah Tops	61
Namoi	Cubbo Uplands	13
Namoi	Gap Hills	53
Namoi	Gwydir Alluvial Plains	46
Namoi	Kaputar Hill Crest Flows and Sands	67
Namoi	Kaputar Slopes	42
Namoi	Kaputar Tops	28
Namoi	Kelvin Range	17
Namoi	Kerringle Outwash Sands	20
Namoi	Lightning Ridge Tablelands and Downs	8
Namoi	Liverpool Alluvial Plains	72
Namoi	Liverpool Range Valleys and Footslopes	80
Namoi	Liverpool Tops	20
Namoi	Manning Great Escarpment Southern Aspect	26
Namoi	Mollyan Hills	65
Namoi	Mooki - Namoi Channels and Floodplains	86
Namoi	Mooki Swamps and Lagoons	95
Namoi	Moonbi - Walcha Granites	53
Namoi	Mount Royal Ridges	46
Namoi	Mount Royal Tops	39
Namoi	Namoi Aeolian Sands	0
Namoi	Namoi Alluvial Plains	37
Namoi	Namoi Channels and Floodplains	39
Namoi	Niangala Plateau and Slopes	67
Namoi	Nombi Plateau and Pinnacles	63
Namoi	Nowendoc - Yarras Serpentinite	48
Namoi	Nundle Hills	76
Namoi	Peel Channels and Floodplain	89
Namoi	Purlewaugh Plains	66
Namoi	Scone - Gloucester Foothills	76
Namoi	Slippery Rock Range	48
Namoi	Split Yard Plateau	51
Namoi	Tamworth - Keepit Slopes and Plains	71
Namoi	Teriderie Alluvial Plains	71
Namoi	The Needles Basalt Peaks	52
Namoi	Tia Tops	79
Namoi	Trinkey Plateau	37
Namoi	Upper Namoi Swamps and Lagoons	34
Namoi	Uralla Basalts and Sands	93
Namoi	Warrumbungle Slopes	46
Namoi	Warrumbungle Tops	2
Namoi	Werris Creek Basalt Hills and Valleys	85
Namoi	Woods Reef Serpentinite	37
Northern Rivers	Apsley Meta-sediments	24
Northern Rivers	Ballina Coastal Ramp	13
Northern Rivers	Baryulgil Ultramafics	54
Northern Rivers	Bellinger Channels and Floodplains	95
Northern Rivers	Brooms Head - Kempsey Coastal Ramp	31
Northern Rivers	Brothers Peaks	20
Northern Rivers	Bulga Plateau	40

Northern Rivers	Byron - Tweed Alluvial Plains	79
Northern Rivers	Byron - Tweed Coastal Barriers	43
Northern Rivers	Clarence - Manning Basin Margin	20
Northern Rivers	Clarence - Richmond Alluvial Plains	75
Northern Rivers	Clarence - Richmond Barriers and Beaches	39
Northern Rivers	Clarence Foothills	48
Northern Rivers	Comboyne Plateau	61
Northern Rivers	Dingo Spur Meta-sediments	39
Northern Rivers	Dorrigo Basalts	76
Northern Rivers	Ebor Tops Basalt	55
Northern Rivers	Ebor Tops Granite	27
Northern Rivers	Flat Top Basalts	1
Northern Rivers	Glenn Innes - Guyra Basalts	84
Northern Rivers	Grafton - Whiporie Basin	35
Northern Rivers	Guyra Lagoons and Swamps	60
Northern Rivers	Guyra Tops Granite	54
Northern Rivers	Hastings Channels and Floodplains	91
Northern Rivers	Ingalba Coastal Hills	44
Northern Rivers	Inverell Plateau Granites	40
Northern Rivers	Lamington Volcanic Slopes	57
Northern Rivers	Macleay Escarpment Foothills	14
Northern Rivers	Manning - Macleay Barriers and Beaches	35
Northern Rivers	Manning - Macleay Channels and Floodplai	89
Northern Rivers	Manning - Macleay Coastal Alluvial Plain	64
Northern Rivers	Manning Great Escarpment Southern Aspect	26
Northern Rivers	Moonbi - Walcha Granites	53
Northern Rivers	Mount Warning Exhumed Slopes	62
Northern Rivers	Mount Warning Plugs	25
Northern Rivers	Niangala Plateau and Slopes	67
Northern Rivers	Nimbin Ridges	5
Northern Rivers	Nowendoc - Yarras Serpentinite	48
Northern Rivers	Nymboida Great Escarpment	23
Northern Rivers	Nymboida Meta-sediments	11
Northern Rivers	Port Macquarie Coastal Ramp	53
Northern Rivers	Richmond Range	8
Northern Rivers	Summervale Range	12
Northern Rivers	Tia Tops	79
Northern Rivers	Tinebank Granites	1
Northern Rivers	Upper Clarence Channels and Floodplains	93
Northern Rivers	Uralla Basalts and Sands	93
Northern Rivers	Valla Granite	8
Northern Rivers	Water	63
Northern Rivers	Wauchope Coastal Foothills	47
Northern Rivers	Woodenbong Syenite Plugs	43
Northern Rivers	Yarrowitch Basalt Plateau	51
Northern Rivers	Yessabah Karst	29
Southern Rivers	Alpine Zone	0
Southern Rivers	Bega Coastal Alluvium	74
Southern Rivers	Bega Coastal Foothills	14
Southern Rivers	Bega Granites	69
Southern Rivers	Bherwherre Barrier	57
Southern Rivers	Bodalla - Nadgee Coastal Sands	20
Southern Rivers	Bomaderry Plains	68
Southern Rivers	Bombala Granite Basin	92
Southern Rivers	Bombala Meta-sediments	81
Southern Rivers	Braidwood Granites	59
Southern Rivers	Breadalbane Swamps and Lagoons	96
Southern Rivers	Budawangs Range	5

Southern Rivers	Bulli Coastal Escarpment	23
Southern Rivers	Bungonia Tableland and Gorge	37
Southern Rivers	Byadbo Ranges Granites	74
Southern Rivers	Byadbo Ranges Meta-sediments	31
Southern Rivers	Cabramurra - Kiandra Basalt Caps and San	9
Southern Rivers	Chimneys Ridge Montane	11
Southern Rivers	Chimneys Ridge Sub-alpine	1
Southern Rivers	Clyde Channel and Floodplain	0
Southern Rivers	Clyde Valley Foothills	8
Southern Rivers	Coolangubra - Good Good Plateau	22
Southern Rivers	Crookwell Basalts and Sands	94
Southern Rivers	Dapto - Wollongong Coastal Slopes	41
Southern Rivers	Darkes Forest Sands	0
Southern Rivers	Fitzroy Falls Escarpment	26
Southern Rivers	Fitzroy Falls Plateau	39
Southern Rivers	Geehi Gorge	1
Southern Rivers	Gourock - Tindery Ranges	3
Southern Rivers	Gourock - Tindery Slopes	16
Southern Rivers	Gundary Plains	78
Southern Rivers	Jagungal Tops	0
Southern Rivers	Jindabyne Plains	58
Southern Rivers	Kangaroo Valley	24
Southern Rivers	Kiama Coastal Slopes	62
Southern Rivers	Kings Cross Montane	5
Southern Rivers	Kings Cross Sub-alpine	0
Southern Rivers	Kioloa Headland	10
Southern Rivers	Kybeyan Montane	0
Southern Rivers	Kybeyan Range	1
Southern Rivers	Lake George Complex	89
Southern Rivers	Lake Illawarra Alluvial Plains	80
Southern Rivers	Lake Illawarra Barrier	86
Southern Rivers	Lower Snowy Gorge	7
Southern Rivers	Lower Snowy Granites	4
Southern Rivers	Lower Snowy Ranges Meta-sediments	39
Southern Rivers	Main Range Montane	2
Southern Rivers	Main Range Sub-alpine	13
Southern Rivers	Milton Basalts and Sands	55
Southern Rivers	Milton Hills	74
Southern Rivers	Minuma Range	7
Southern Rivers	Molonglo Ranges	44
Southern Rivers	Monaro Alluvium	67
Southern Rivers	Monaro Lakes	86
Southern Rivers	Monaro Plains Basalts and Sands	66
Southern Rivers	Monaro Plains Granites	54
Southern Rivers	Monaro Plains Meta-sediments	64
Southern Rivers	Moruya Barrier	40
Southern Rivers	Moruya Channels and Floodplains	36
Southern Rivers	Moruya Granite Basins	39
Southern Rivers	Moruya Valley Foothills	9
Southern Rivers	Moss Vale Highlands	59
Southern Rivers	Mt Dromedary - Mumbula Mountain	17
Southern Rivers	Mt Imlay Peak	0
Southern Rivers	Nadgee Coastal Range	9
Southern Rivers	Nowra - Durras Coastal Slopes	38
Southern Rivers	Robertson Basalts	74
Southern Rivers	Sassafras - Nerriga Basalts and Gravels	27
Southern Rivers	Seven Mile Barrier	65
Southern Rivers	Shoalhaven Alluvial Plain	30
Southern Rivers	Shoalhaven Channels and Floodplain	57

Southern Rivers	Shoalhaven Gorge	18
Southern Rivers	Shoalhaven Tertiary Sands	32
Southern Rivers	Snowball High Valley	62
Southern Rivers	Sydney - Newcastle Barriers and Beaches	74
Southern Rivers	Towamba Channel and Floodplain	48
Southern Rivers	Towamba Granite	20
Southern Rivers	Towrang Ranges	74
Southern Rivers	Tuross - Eden Barriers and Beaches	57
Southern Rivers	Tuross Basalts and Sands	12
Southern Rivers	Tuross Channel and Floodplain	43
Southern Rivers	Varneys Range	79
Southern Rivers	Wandanadian Coastal Plains	22
Southern Rivers	Wandanadian Granite	0
Southern Rivers	Water	63
Southern Rivers	Wingecarribee Swamp	100
Southern Rivers	Wollondilly - Bindook Tablelands and Gor	34
Southern Rivers	Woronora Plateau	17
Southern Rivers	Yalwal - Tallowal Tableland	1
Southern Rivers	Yalwal Gorges	1
Sydney Metro	Ashfield Plains	98
Sydney Metro	Belrose Coastal Slopes	59
Sydney Metro	Blaxlands Ridge	25
Sydney Metro	Cumberland Plain	91
Sydney Metro	Darkes Forest Sands	0
Sydney Metro	Georges River Alluvial Plain	93
Sydney Metro	Gosford - Cooranbong Coastal Slopes	36
Sydney Metro	Hawkesbury - Nepean Channels and Floodpl	74
Sydney Metro	Hornsby Plateau	20
Sydney Metro	Howes Range	2
Sydney Metro	MacDonald Channel and Floodplain	41
Sydney Metro	Mangrove Creek Valley	8
Sydney Metro	Pennant Hills Ridges	74
Sydney Metro	Picton - Razorback Hills	55
Sydney Metro	Port Jackson Basin	88
Sydney Metro	Sydney - Newcastle Barriers and Beaches	74
Sydney Metro	Sydney Basin Diatremes	27
Sydney Metro	Woronora Plateau	17
Western	Barnato Downs	0
Western	Barnato Incised Streams	8
Western	Barnato Isolated Hills	7
Western	Barnato Lakes	4
Western	Barnato Linear Dunes	0
Western	Barnato Plains	0
Western	Barnato Wide Valleys	5
Western	Barrier Alluvial Plains	0
Western	Barrier Downs	0
Western	Barrier Fresh Lakes and Swamps	0
Western	Barrier Ranges	0
Western	Barrier Salt Lakes and Playas	0
Western	Barrier Sandplains	0
Western	Barrier Tablelands	1
Western	Barwon Alluvial Plains	14
Western	Barwon Channels and Floodplains	22
Western	Belarabon Range	3
Western	Bogan Alluvial Plains	57
Western	Bogan Channels and Floodplains	29
Western	Bokara Hills	1
Western	Buckambool - Jackermaroo Hills	5
Western	Bulloo Channels and Floodouts	0

Western	Bulloo Linear Dunes	0
Western	Bulloo Littoral and Lunettes	0
Western	Bulloo Salt Lakes and Playas	2
Western	Bulloo Sandplains	3
Western	Canbellego - Boppy Hills	0
Western	Castlereagh Alluvial Plains	80
Western	Cobar Basalt Hills	11
Western	Cobar Downs	14
Western	Cobar Granite Downs	6
Western	Cobar Incised Streams	7
Western	Cobar Isolated Hills	4
Western	Cobar Plains	4
Western	Cobar Tablelands	19
Western	Collarenebri Tablelands and Downs	22
Western	Corona Teamsters Limestone	1
Western	Culgoa - Narran Alluvial Plains	7
Western	Culgoa - Narran Channels and Floodplains	2
Western	Culgoa Channels and Floodouts	6
Western	Gilgunnia - Broken Ranges	0
Western	Gunderbooka Range	1
Western	Gwydir Alluvial Plains	46
Western	Ivanhoe - Nangara Alluvial Plains	0
Western	Ivanhoe - Nangara Dunes	2
Western	Ivanhoe - Nangara Fresh Lakes and Swamps	0
Western	Ivanhoe - Nangara Isolated Hills	0
Western	Ivanhoe - Nangara Linear Dunes	0
Western	Ivanhoe - Nangara Relic Lakes	0
Western	Ivanhoe - Nangara Salt Lakes and Playas	0
Western	Ivanhoe - Nangara Sandplains	1
Western	Lightning Ridge Tablelands and Downs	8
Western	Lower Darling Alluvial Plains	0
Western	Lower Darling Channels and Floodplains	1
Western	Lower Darling Fresh Lakes and Swamps	30
Western	Lower Darling Salt Lakes and Playas	0
Western	Maccullochs Range	0
Western	Mallee Cliffs Dunes	0
Western	Mallee Cliffs Salt Lakes and Playas	5
Western	Mallee Cliffs Sandplains	21
Western	Marma Hills	1
Western	Mid-Darling Alluvial Plains	0
Western	Mid-Darling Channels and Floodplains	8
Western	Mid-Darling Isolated Hills	5
Western	Mid-Darling Lakes and Swamps	4
Western	Mid-Darling Plains	1
Western	Mid-Darling Tablelands	0
Western	Mootwingee - Wonaminta Alluvial Plains	0
Western	Mootwingee - Wonaminta Downs	0
Western	Mootwingee - Wonaminta Dunes	3
Western	Mootwingee - Wonaminta Footslopes	0
Western	Mootwingee - Wonaminta Fresh Lakes	48
Western	Mootwingee - Wonaminta Linear Dunes	1
Western	Mootwingee - Wonaminta Ranges	0
Western	Mootwingee - Wonaminta Salt Lakes and pl	0
Western	Mootwingee - Wonaminta Sandplains	0
Western	Mootwingee - Wonaminta Tablelands	1
Western	Mt Grenfell Ridges	3
Western	Mt Murchison Hills and Ranges	0
Western	Mt Pleasant Hills and Ranges	0
Western	Nangarybone Hills	24

Western	Narran Lakes	35
Western	Neckarbo Range	4
Western	Nymagee Downs	30
Western	Nymagee Granite Downs	35
Western	Nymagee Isolated Bedrock Hills	18
Western	Nymagee Linear Dunes	8
Western	Nymagee Ranges	5
Western	Nymagee Sandplains	37
Western	Nymagee Wide Valleys	48
Western	Oxley Range	7
Western	Paroo - Warrego Alluvial Plains	0
Western	Paroo - Warrego Channels and Floodouts	1
Western	Paroo - Warrego Isolated Hills	0
Western	Paroo - Warrego Linear Dunes	0
Western	Paroo - Warrego Plains	1
Western	Paroo - Warrego Salt Lakes	0
Western	Paroo - Warrego Sandplains	0
Western	Paroo - Warrego Tablelands and Downs	0
Western	Sayers Lake	3
Western	Scropes Alluvial Plains	4
Western	Scropes Downs	0
Western	Scropes Linear Dunes	0
Western	Scropes Ranges	0
Western	Scropes Salt Lakes and Playas	0
Western	Scropes Sandplains	0
Western	Shearlegs Hills	10
Western	Sturt Dunes	0
Western	Sturt Linear Dunes	0
Western	Tibooburra Alluvial Plains	0
Western	Tibooburra Downs	0
Western	Tibooburra Fresh Lakes and Swamps	0
Western	Tibooburra Ranges	1
Western	Tibooburra Salt Lakes and Playas	2
Western	Tibooburra Sandplains	1
Western	Tibooburra Tablelands	0
Western	Ursino Alluvial Plains	0
Western	Ursino Linear Dunes	0
Western	Ursino Sandplains	0
Western	Ursino Tablelands and Downs	0
Western	White Cliffs Alluvial Plains	0
Western	White Cliffs Sandplains	5
Western	White Cliffs Tablelands and Downs	0

Appendix D Cleared estimate as a percent of each vegetation unit within a CMA

CMA	Keith Formation NameXCMA Code	Keith Form Code	VEGETATION UNIT NAME	Cleared Estimate
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 106: Pilliga heath - Calytrix tetragona/Melaleuca uncinata/Acacia burrowii	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 107: Pilliga ironbark woodland - E. fibrosa/Acacia burrowii/Goodenia rotundifolia	34
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 108: Kaputar heath woodland - C. trachyphloia/Ozothamnus obcordatus	27
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 111: Warrumbungles shrubby cypress woodland - C. endlicheri/Cassinia quinquefaria/Olearia elliptica	42
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 112: Eastern grassy ironbark woodland - E. crebra/Digitaria ramularis/Microlaena stipoides	52
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 115: Bebo ironbark/angophora woodland - E. crebra/Angophora leiocarpa/Acacia leptoclada	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 116: Warialda shrubby cypress woodland - C. endlicheri/Melichrus urceolatus/Pultenaea sp.C	44
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 119: North-eastern shrubby cypress/angophora woodland - C. endlicheri/Angophora leiocarpa/Melichrus urceolatus/Persoonia terminalis	39
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 123: Northern cypress grass/shrub woodland - C. endlicheri/Aristida caput-medusae/Acacia conferta	49
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 126: Southern heath woodland - E. sparsifolia/Goodenia hederacea	49
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 130: Goonoo ironbark heath woodland - E. nubila/Calytrix tetragona	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 134: Southern ironbark/cypress woodland - E. crebra/C. endlicheri/Austrodanthonia monticola/Acacia triptera	65
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 149: Southern Pilliga heathy cypress/bloodwood woodland - Callitris endlicheri/Corymbia trachyphloia/Persoonia cuspidifera	45
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 150: Southern Pilliga bloodwood woodland - Corymbia trachyphloia/E. rossii/Bossiaea rhombifolia	41
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 151: Pilliga NR heathy woodland - Corymbia trachyphloia/Persoonia sericea	35
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 152: Pilliga heathy woodland - C. trachyphloia/Allocasuarina diminuta	34
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 153: Pilliga heathy woodland - E. fibrosa/Dianella revoluta	39
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 154: Pilliga heathy woodland - C. trachyphloia/Acacia cheelii	46
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 156: Pilliga NR heathy woodland - C. trachyphloia/Cassinia arcuata	39
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 157: Binnaway cypress woodland - Callitris endlicheri/E. macrorhyncha/Persoonia cuspidifera	43
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 61:Basalt shrubby ironbark woodland - E. crebra/Olearia elliptica	33
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 62: North eastern shrubby ironbark/cypress woodland - E. melanophloia/Callitris glaucophylla/Leptospermum brevipes	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 63: North eastern gum woodland - E. dealbata/Plectranthus parviflorus/Calotis dentex	36
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 67: Pilliga ironbark/bull oak woodland - E. crebra/A. luehmannii/Lissanthe strigosa	47
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 71: Northern acacia woodland - Acacia spp./Alphitonia excelsa	44
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 84: Yetman spinifex woodland - Triodia mitchellii	70
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BBS 85: Yetman spinifex woodland - Triodia scariosa	72
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BVT 12: Mixed Ironbarks and Bloodwood open forest on sandy outwash	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	BVT 13: Mixed Eucalyptus and Callitris Pine Open Forests on Ranges and Slopes	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	FE: 113a Peppermint leuco granite	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	FE: 149 Mallee-Peppermint mosaic	7
Border Rivers/ Gwydir	Dry Sclerophyll Shrub	_6E2	FE: 189 Silverleaved Ironbark-Cypress	46

	Forests (CMA 6)			
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	FE: 194 Round-leaved Gum wet heath	29
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	FE: 197 Broad-leaved Stringybark	66
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	FE: 38 Dry Heathy New England Blackbut	22
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 1: Black Pine Granite Outcrop Shrubby Woodland; tableland edge	54
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 10: Black Pine/Tumbledown Red Gum/Narrow-leaved Ironbark/Red Stringybark Shrub/Grass Open Forest; Severn River	58
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 100: McKies Stringybark/New England Blackbutt/Rough-barked Apple Grassy Open Forest; tableland edge	49
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 103: Mugga Ironbark/Black Pine Shrubby Open Forest; north-west	78
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 11: Caley's Ironbark/Orange Gum/Black Pine Shrubby Open Forest; Severn River	50
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 111: Stringybark/Spinifex Serpentine Woodlands; scattered	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 112: Green Mallee Mallee Woodland; scattered	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 116: Carbeen Woodland	70
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 12: Orange Gum/Caley's Ironbark/New England Blackbutt Heathy Open Forest; Severn River	31
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 13: Black Pine/Rough-barked Apple/Stringybark Shrubby Open Forest; tableland edge	44
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 14: Orange Gum/Caley's Ironbark/Red Stringybark Shrub/Grass Open Forest; southern tableland edge	25
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 16: New England Blackbutt/Youman's Stringybark Grassy Open Forest; tableland edge	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 17: Tumbledown Gum/Black Pine/Acacia cheelii Shrubby Open Forest; scattered	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 18: Tumbledown Red Gum/Dwyer's Red Gum Shrubby Woodland; western	54
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 19: Tumbledown Red Gum/Caley's Ironbark Shrubby Open Forest; Rock of Gibraltar	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 2: Black Pine Granite Outcrop Shrubland/Open Woodland; tableland edge	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 20: Narrow-leaved Ironbark/Pine/Brown Bloodwood Shrub/Grass Open Forest; north-west	27
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 21: Black Pine/Narrow-leaved Ironbark/Dirty Gum Grassy Open Forest; north-west	29
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 22: White Pine/Narrow-leaved Ironbark Shrub/Grass Open Forest; north-west	55
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 23: Black Pine/Northern Smooth-barked Apple Shrubby Open Forest; north-west	35
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 24: White Pine/Northern Smooth-barked Apple Shrubby Open Forest; north-west	43
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 25: Tumbledown Red Gum/White Pine/Silver-leaved Ironbark Shrubby Open Forest; northern	22
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 26: Tumbledown Red Gum/Black Pine shrubby forest	60
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 27: Tumbledown Red Gum/Orange Gum/White Pine Shrubby Open Forest; Kwiambal	56
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 28: Black Pine/Tumbledown Red Gum/Caley's Ironbark Shrub/Grass Open Forest; widespread	74
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 30: Tumbledown Red Gum/Caley's Ironbark Shrubby Open Forest; scattered	3
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 31: White Pine/Silver-leaved Ironbark/Tumbledown Red Gum Grassy Open Forest; far north	50
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 32: White Pine/Tumbledown Gum Shrubby Open Forest ; northern	51
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 33:Dirty Gum/White Pine/Northern Smooth-barked Apple Shrub/Grass Open Forest; north-west	44
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 34: White Pine/Silver-leaved Ironbark/Tumbledown Red Gum Shrubby Open Forest; Kwiambal	52
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 35: White Pine/Silver-leaved Ironbark/Tumbledown Red Gum Shrubby Open Forest; northern	58
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 40: Silver-leaved Ironbark/Black Pine/White Box Shrubby Open Forest; northern	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 48: White Pine/Silver-leaved Ironbark/White Box Shrub/Grass Open Forest; Warialda-Bingara	71

Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 6: Orange Gum/Black Pine Shrubby Open Forest; north-east	37
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 62: Tumbledown Red Gum/Pine Shrubby Open Forest; northern	64
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 63: Rough-barked Apple/Red Stringybark Shrubby Open Forest; widespread	83
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 64:Black Pine/White Box Shrubby Open Forest; Kaputar	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 65: White Box/Silver-top Stringybark/White Pine Shrubby Open Forest; southern hilly	35
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 68: Silver-top Stringybark/Rough-barked Apple/E. quiniorum Shrubby Open Forest; southern tableland edge	30
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 69: White Box/Rough-barked Apple Shrubby Open Forest; western	45
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 70: Narrow-leaved Ironbark/Black Pine Shrubby Open Forest; Kaputar	56
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 71: White Box Shrubby Open Forest; Melville Range	55
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 74: Nandewar Box/New England Blackbutt/Red Stringybark Shrub/Grass Open Forest; Kaputar	23
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 79: Silver-top Stringybark/Rough-barked Apple Grassy Open Forest; southern hills	43
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 89: White Box/White Pine/Silver-leaved Ironbark Shrubby Open Forest; western	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 9: Black Pine/Tumbledown Red Gum/Narrow-leaved Ironbark Shrubby Open Forest; north-east	38
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 90: White Pine/Silver-leaved Ironbark Shrubby Woodland; nort-west	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 91: Rough-barked Apple/White Box/Rusty Fig Shrubby Open Forest; Kaputar	45
Border Rivers/ Gwydir	Dry Sclerophyll Shrub Forests (CMA 6)	_6E2	Nd 97: Bendemeer White Gum/Silver-top Stringybark Grassy Open Forest; Kaputar and southern tableland edge	68
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 20: Eastern Liverpool Range herb woodland - E. albens/Acaena novae-zelandiae	76
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 22: Pilliga cypress grass/herb woodland - Callitris glaucophylla/Austrodanthonia racemosa/Calotis lappulacea	60
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 25: Basalt slopes box woodland - E. albens/Poa sieberiana/Cassinia quinquefaria	70
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 59: Warrumbungles cypress woodland - Callitris glaucophylla/Notodanthonia longifolia	39
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 60: Warrumbungles shrubby woodland - E. albens/E. macrorhyncha/Olearia elliptica	40
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 64: Pilliga cypress/bull oak woodland - Callitris glaucophylla/Allocasuarina luehmannii/Eragrostis lacunaria	66
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 65: Pilliga grassy cypress woodland - Callitris glaucophylla/Allocasuarina luehmannii/Digitaria diffusa	57
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 68: Pilliga cypress/box herb woodland - Callitris glaucophylla/E. populnea/Enchylaena tomentosa	82
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	BBS 70: Pilliga west grass/herb cypress woodland - Callitris glaucophylla/Austrostipa scabra/Evolvulus alsinoides	82
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 113b Peppermint non granite	53
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 139 Stringybark-Apple	61
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 146 Tallowwood	93
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 182 Apple-Black Cypress	56
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests	_6E1	FE: 200 Broad-leaved Stringybark-Ribbon Gum	64

	(CMA 6)			
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 35 Dry Grassy Stringybark	37
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 41 Dry Open New England Blackbutt	66
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 53 Gorge Grey Box	86
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 63 Grey Gum-Stringybark	61
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	FE: 93 Montane Stringybark-Gum	60
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 105: Mugga Ironbark/Blakely's Red Gum Shrub/Grass Open Forest; Bingarra	49
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 29: White Pine/Tumbledown Red Gum/Caley's Ironbark Shrubby Open Forest; widespread	41
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 36: White Pine/White Box Shrub/Grass Open Forest; central	72
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 37: White Pine/White Box/Silver-leaved Ironbark Shrubby Open Forest; western	48
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 41: Silver-leaved Ironbark/White Pine/Tumbledown Red Gum Shrub/Grass Open Forest; Ashford	44
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 42: White Box Shrubby Open Forest; widespread	17
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 54: Tumbledown Red Gum/ Blakely's Red Gum Shrubby Open Forest; northern	71
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 66: Silver-top Stringybark/Orange Gum Shrubby Open Forest; Horton	28
Border Rivers/ Gwydir	Dry Sclerophyll Shrub/Grass Forests (CMA 6)	_6E1	Nd 98: Grey Box/Rough-barked Apple Shrub/Grass Open Forest; northern	73
Border Rivers/ Gwydir	Freshwater Wetlands (CMA 6)	_6J	BBS 176: Clay plain wet herbland - Marsilea drummondii/Eleocharis pallens/Sclerolaena muricata	92
Border Rivers/ Gwydir	Freshwater Wetlands (CMA 6)	_6J	BVT 2: Floodplain Wetland	30
Border Rivers/ Gwydir	Freshwater Wetlands (CMA 6)	_6J	FE: 199 Riparian Shrubland	76
Border Rivers/ Gwydir	Freshwater Wetlands (CMA 6)	_6J	Nd 115: Swamp and Wetland	70
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 169: Wet grassland - Marsilea drummondii/Bothriochloa biloba	96
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 171: Grassland - Austrostipa verticillata/Rhagodia spinescens	96
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 172: Northern clay plain grassland - Panicum buncei/Sporobolus creber/Tribulus micrococcus	91
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 174: Clay plain grassland - Enteropogon acicularis/Paspalidium constrictum	95
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 179: North western wet grassland - Paspalidium jubiflorum/Marsilea drummondii	95
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 183: Moree grassland - Chloris truncata/Solanum esuriale	93
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 184: Moree grassland - Austrostipa aristiglumis/Sporobolus elongatus	91
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 185: Moree grassland - Desmodium campylocaulon/Aristida leptopoda	96
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 187: Moree grassland - Eriochloa crebra/Panicum decompositum	97
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BBS 190: Northern clay plain grassland - Bothrichloa decipiens/Asperula conferta	68
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	BVT 7: Alluvial Plains Grassland	75
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 106: Weeping Myall Woodland/Shrubland; scattered	94
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 81: Redleg Grass Grassland/Open Woodland; western	70
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 82: Spear Grass/ Bluegrass Grassland/Open Woodland;	70

			central/southern	
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 85: Plains Grass/Bluegrass Grassland; western	82
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 86: Bluegrass Grassland; north-west	82
Border Rivers/ Gwydir	Grasslands (CMA 6)	_6I	Nd 88: Bluegrass/Spear Grass; northern	82
Border Rivers/ Gwydir	Heathlands (CMA 6)	_6G	FE: 56 Granite Mallee	10
Border Rivers/ Gwydir	Heathlands (CMA 6)	_6G	Nd 5: Shrublands; Kaputar Trachyte	27
Border Rivers/ Gwydir	Heathlands (CMA 6)	_6G	Nd 7: Shrublands; Howell	1
Border Rivers/ Gwydir	Rainforests (CMA 6)	_6A	BBS 192: Vine thicket - Cassine australis/Carissa ovata	66
Border Rivers/ Gwydir	Rainforests (CMA 6)	_6A	Nd 107: Ooline Open or Closed Forest; scattered	44
Border Rivers/ Gwydir	Rainforests (CMA 6)	_6A	Nd 114: Semi Evergreen Vine Thicket; scattered	70
Border Rivers/ Gwydir	Rainforests (CMA 6)	_6A	Nd 92: Rusty Fig Dry Rainforest; scattered	20
Border Rivers/ Gwydir	Rainforests (CMA 6)	_6A	Nd 93: Alectryon/Rusty Fig/Mock Olive Dry Rainforest; scattered	54
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 90: Northern Pilliga box woodland - E. pilligaensis/Aristida leichhardtiana	88
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 1: Towarri moist forest - E. dalrympleana/Rubus moluccanus	83
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 17: Coolah Tops herb forest - E. laevopinea/Acaena novae-zelandiae	81
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 200: Northern box woodland - E. populnea/Casuarina cristata/Chloris truncata/Pycnosorus globosus	96
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 21: Coolah Tops grass/herb forest - E. laevopinea/Hydrocotyle laxiflora	82
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 31: Northern grassy cypress woodland - C. glaucophylla/Austrostipa verticillata	78
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 69: Liverpool Plains box woodland/grassland - E. microcarpa/Einadia nutans/Oxalis perennans	78
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 76: Northern cypress/bulloak woodland - Allocasuarina luehmannii/Callitris glaucophylla/Acacia deanei	45
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 91: Southern grassy callitris woodland - C. glaucophylla/Austrostipa scabra	58
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BBS 96:Western grassy box woodland - E. populnea/Enteropogon acicularis	93
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BVT 10: White Box Woodlands on Slopes and Hills	33
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BVT 11: Mixed woodlands of Yellow Box and Rough-barked Apple on Alluvial Flats	72
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BVT 6: Sparse Myall/Rosewood woodlands on Elevated Floodplain	56
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	BVT 8: Belah Woodland / Shrubland on Plains and Rolling Downs	60
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 114 Peppermint-Mountain/Manna Gum	60
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 131 Snow Gum	47
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 132 Snow Gum -Mountain/Manna Gum	76
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 17 Candlebark	84
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 179 Yellow Box - Broad-leaved Stringybark	65
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 181 Stringybark - Gum	12
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 196 Broad-leaved Stringybark - Apple Box	62
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 200 Broad-leaved Stringybark - Ribbon Gum	64
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 79 Manna Gum-Stringybark	18
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 80 Manna Gum	63
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	FE: 99 New England Stringybark-Blakelys Red Gum	86
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 101: Western Grey Box/Pilliga Box Grassy Open Forest; north-west	49
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 15: Rough-barked Apple/Blakely's Red Gum Grassy Open Forest; central tableland edge	54
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 38: White Pine/White Box Grass/Forb Open Forest; widespread	67
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 39: White Box/White Pine Shrub/Grass Open Forest; central	86
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 44: White Box Grassy Open Forest; widespread (mainly southern)	85

Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 46: White Pine/Silver-leaved Ironbark Grassy Open Forest; north-west	66
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 47: White Pine/Narrow-leaved Ironbark Shrub/Grass Open Forest; north-west	45
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 55: Blakely's Red Gum/Rough-barked Apple/Red Stringybark Grassy Open Forest; tableland edge	59
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 56: Blakely's Red Gum/White Pine/Rough-barked Apple Grassy Open Forest; northern drainage lines	76
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 57: Yellow Box/Blakely's Red Gum Grassy Woodland; widespread	81
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 58: Rough-barked Apple Riparian Forb/Grass Open Forest; widespread	68
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 60: Blakely's Red Gum/Yellow Box Grassy Open Forest/Woodland; tablelands	81
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 61: White Box Grassy Open Forest; northern	88
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 67: Rough-barked Apple/Silver-top Stringybark/Red Stringybark Grassy Open Forest; tableland edge	55
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 83: White Pine/Silver-leaved Ironbark Grassy Open Forest; northern	85
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 84: White Pine/Silver-leaved Ironbark Shrub/Grass Open Forest; central	79
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 87: White Box Shrub/Grass Open Forest; north-west	89
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 95: Bimble Box/White Pine Grassy Woodland; western	89
Border Rivers/ Gwydir	Sclerophyll Grassy Woodlands (CMA 6)	_6D	Nd 99: Grey Box/Blakely's Red Gum/Yellow Box Grassy Open Forest; widespread	90
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 166: Floodplain woodland - E. coolabah/Einadia nutans/Eleocharis plana	96
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 167: Floodplain woodland - E. coolabah/Acacia stenophylla/Muehlenbeckia florulenta	95
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 193: Belah vine thicket - Casuarina cristata/Carissa ovata/Spartothamnella juncea	65
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 195: Northern belah - Casuarina cristata/Capparis lasiantha/Abutilon oxycarpum	91
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 196: Belah herb woodland - Casuarina cristata/Einadia nutans/E. coolabah	95
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BBS 197: Belah wilga woodland - C. cristata/Geijera parviflora/Rhagodia spinescens	95
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BVT 3: Bimble Box Woodlands on Alluvial Plain	49
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BVT 4: White Callitris Pine and Carbeen open forests on sandy rises	23
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BVT 5: Black Box and Coolabah Floodplain Woodland	51
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	BVT 9: Brigalow Shrublands on Rolling Downs	75
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	Nd 94: Belah/White Pine Shrubby Woodland (with patches of Semi Evergreen Vine Thicket); north-west	67
Border Rivers/ Gwydir	Semi-arid Woodlands (CMA 6)	_6F	Nd 96: Brigalow Acacia Woodland; scattered	73
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	BBS 11: Montane shrubby stringybark forest - E. laevopinea/Olearia viscidula	22
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	BBS 14: Kaputar shrub woodland - E. volcanica/Cassinia quinquefaria	15
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	BBS 15: Kaputar grassy woodland - E. dalrympleana/Poa sieberiana/Coprosma hirtella	2
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	BBS 6: Kaputar montane woodland - E. dalrympleana/Viola betonicifolia	22
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 110 Open Silvertop Stringybark-Blue Gum	37
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 111 Open Silvertop Stringybark-Tallowwood	57
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 123 Roundleaved Gum	78
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 30 Diehard Stringybark-New England Blackbutt	21
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 60 Grassy New England Blackbutt-Tallowwood-Blue Gum	37
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 82 Messmate - Mountain Gum	30
Border Rivers/ Gwydir	Semi-mesic Forests	_6B2	FE: 86 Mixed New England Stringybarks	17

	(CMA 6)			
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 87 Mixed Tableland Stringybark-Gum Open Fores	30
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 90 Moist Messmate-Gum	27
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	FE: 98 New England Peppermint	36
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	Nd 77: Ribbon Gum/ Silver-top Stringybark Ferny Open Forest; Kaputar	34
Border Rivers/ Gwydir	Semi-mesic Forests (CMA 6)	_6B2	Nd 78: Snow Gum/New England Peppermint Grassy Open Forest; tableland edge	72
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	BBS 137: Riparian bottlebrush woodland - Callistemon viminalis	43
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	BBS 143: Riparian red gum woodland - E. blakelyi/Leptospermum polygalifolium	46
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	BBS 2: Kaputar riparian woodland - Casuarina cunninghamiana/Stephania japonica	47
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	BVT 1: Red Gum Riverine Forest	52
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	Nd 108: Paperbark Riparian Forb/Grass Low Closed Forest; widespread	50
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	Nd 109: River Oak Riparian Open Forest; widespread	60
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	Nd 110: River Red Gum Riparian Open Forest/Woodland; widespread	70
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	Nd 49: Tea-tree Drainage Line Shrubland; scattered	19
Border Rivers/ Gwydir	Swamp Sclerophyll Forests (CMA 6)	_6C	Nd 58: Rough-barked Apple Riparian Forb/Grass Open Forest; widespread	68
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 150 Washpool Brushbox-Tallowwood	30
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 29 Corkwood-Crabapple and Mixed Stringybarks	33
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 68 High Elevation Messmate-Brown Barrell	88
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 81 Messmate	55
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 88 Moist Escarpment New England Blackbutt	33
Border Rivers/ Gwydir	Wet Sclerophyll Forests (CMA 6)	_6B1	FE: 92 Moist Shrubby Stringybark-Gum	71
Border Rivers/Gwydir	Freshwater Wetlands (CMA 6)	_6J	Basalt Plateau Lagoons	70
Border Rivers/Gwydir	Freshwater Wetlands (CMA 6)	_6J	Upland Heath Swamps	30
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones	33
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Copperburr shrubland of the NSW northern inland alluvial floodplains	0
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Bladder Saltbush chenopod shrubland on alluvial soils mainly in the Darling Riverine Plain Bioregion.	80
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone	60
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Gidgee chenopod woodland of the semi-arid (hot) climate zone, brown-red clays mainly Mulga Lands Bioregion.	12
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Leopardwood woodland of alluvial plains	46
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Mulga - Ironwood shrubland on loams and clays mainly of the Cobar Peneplain Bioregion	33
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Old Man Saltbush shrubland of the semi-arid hot (pesistently dry) and arid climate zones (north-western NSW)	88
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Slender-fruit Saltbush - Black Roly Poly low open shrubland of the Darling Riverine Plain	62
Central West	Arid and Semi-arid Shrublands (CMA 3)	_3L	Yarran shrubland on peneplains and alluvial plains of central-northern NSW	75
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Acacia woodlands of the Brigalow Belt South	90
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Black Cypress Heathy Woodlands of the Brigalow Belt South	90
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Blue Mallee - Green Mallee - Bull Mallee very tall mallee shrubland	51
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Blue-leaf Ironbark woodland on sandy uplands and slopes	16

Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Buloke - White Cypress Pine woodland mainly in the NSW SW Slopes Bioregion	97
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Dapper ironbark woodland	86
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Dwyer's mallee - Black Cypress Pine - Currawang woodland of rocky hills of temperate (hot summer) climate zone	95
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Dwyers Red Gum woodland on siliceous substrates in the Brigalow Belt South Bioregion	17
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Eucalyptus nubila heathy woodland (Pilliga)	62
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Eucalyptus sparsifolia heathy woodland	75
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Eucalyptus subtilior shrubby woodland (Kaputar)	42
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Eucalyptus volcanica shrubby woodland (Kaputar)	25
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Kaputar stringybark fern forest	30
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Kaputar stringybark woodland	26
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Mugga Ironbark - Inland Grey Box - Pine tall woodland of the NSW South Western Slopes Bioregion	58
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Mugga Ironbark - Pilliga Box - Pine- Buloke shrubby woodland on Jurassic Sandstone of outwash plains	78
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Mugga Ironbark - White Cypress Pine woodland on sedimentary or metamorphic low rises in the temperate (hot summer) climate zone	87
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Northern Heath Woodland	90
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Red Stringybark woodland on dry slopes	87
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Rocky outcrop shrubland	50
Central West	Dry Sclerophyll Shrub Forests (CMA 3)	_3E2	Sydney sandstone hinterland dry sclerophyll forests	29
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Broombush shrubland of the sand plains of the Pilliga region, subtropical sub-humid climate zone	91
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Brown Bloodwood Heathy Woodland	94
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Eastern shrubby White Box / fig woodland	68
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Narrow-leaf Red Ironbark heathy woodland	81
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Pilliga Box - Poplar Box- White Cypress Pine grassy open woodland on alluvial loams mainly of the temperate (hot summer) climate zone	93
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Pilliga Broad-leaved Ironbark woodland	92
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Red Stringybark woodland on dry slopes	87
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	River Oak riparian woodland of the Brigalow Belt South and Nandewar Bioregions	97
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Scribbly Gum / Brown Bloodwood woodland on volcanic slopes	1
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Semi-mesic woodland on basalt hills of the dry subtropical climate zone, north western slopes of NSW	67
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Shrubby White Box Woodland	98
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Spinifex - Buloke hummock grassland/low open woodland of alkaline sandy outwash plains	58
Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	Warrumbungles White Cypress woodland	87

Central West	Dry Sclerophyll Shrub/Grass Forests (CMA 3)	_3E1	White Cypress Pine woodland on sandy loam soils on the plains of central NSW (wheatbelt) (Grey Box, Pilliga Box)	98
Central West	Freshwater Wetlands (CMA 3)	_3J	Canegrass swamp of drainage depressions, playa lakes and pans of the inland plains	10
Central West	Freshwater Wetlands (CMA 3)	_3J	Common Reed - Bushy Groundsel reedland/forbland of inland river systems	33
Central West	Freshwater Wetlands (CMA 3)	_3J	Cumbungi rushland of shallow semi-permanent water bodies of the inland river systems	25
Central West	Freshwater Wetlands (CMA 3)	_3J	Lignum shrubland on regularly flooded alluvial clay depressions in the Brigalow Belt South and eastern Darling Riverine Plains Bioregions	97
Central West	Freshwater Wetlands (CMA 3)	_3J	River Coobah swamp on the floodplains of the Darling Riverine Plains and Brigalow Belt South Bioregions	50
Central West	Freshwater Wetlands (CMA 3)	_3J	Semi-permanent open freshwater wetlands of the inland slopes and plains	40
Central West	Freshwater Wetlands (CMA 3)	_3J	Shallow freshwater mixed marsh sedgeland of northern-western NSW floodplains	56
Central West	Freshwater Wetlands (CMA 3)	_3J	Water Couch marsh of frequently flooded inland watercourses	79
Central West	Grasslands (CMA 3)	_3I	Clay Grasslands of the Brigalow Belt South	99
Central West	Grasslands (CMA 3)	_3I	Couch Grass grassland on river banks and floodplains of inland river systems	17
Central West	Grasslands (CMA 3)	_3I	Derived tussock grasslands of the central western plains and lower slopes of NSW	0
Central West	Grasslands (CMA 3)	_3I	Liverpool Plains grassland	95
Central West	Grasslands (CMA 3)	_3I	Mitchell Grass grassland of the semi-arid (hot) and arid zone alluvial floodplains	53
Central West	Grasslands (CMA 3)	_3I	Native Millet - Cup Grass grassland of the Darling Rverine Plain Bioregion	97
Central West	Grasslands (CMA 3)	_3I	Plains Grass grassland on alluvial dark grey clays of central New South Wales	96
Central West	Grasslands (CMA 3)	_3I	Rat's Tail Couch sod grassland of inland floodplains	40
Central West	Grasslands (CMA 3)	_3I	Windmill Grass - Curly Windmill Grass - Button Grass alluvial plains grasslands in the dry subtropical climate zone	99
Central West	Heathlands (CMA 3)	_3G	Heathy shrubland on volcanic outcrops	1
Central West	Heathlands (CMA 3)	_3G	Sydney sandstone montane heaths	9
Central West	Rainforests (CMA 3)	_3A	Ooline	93
Central West	Rainforests (CMA 3)	_3A	Semi-evergreen vine thicket of basalt hills of the NSW north western slopes	97
Central West	Rainforests (CMA 3)	_3A	Wilga - Western Rosewood shrubland of the tropical sub-humid climate zone Brigalow Belt South and Darling Riverine Plains Bioregions	73
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Eastern Liverpool Range herb woodland	73
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Fuzzy Box - Inland Grey Box on alluvial brown loam soils of the NSW South Western Slopes Bioregion and southern BBS Bioregion.	97
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Fuzzy Box on loams in the Nandewar Bioregion and northern Brigalow Belt South Bioregion	88
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Grassy White Box woodland	97
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Inland Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion	73
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Inland Grey Box tall grassy woodland on clay soils in the Brigalow Belt South and Nandewar Bioregions	96
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Mixed box woodland on low sandy-loam rises on alluvial plains in central western NSW	80
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Mountain Gum woodland	76
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Poplar Box - Belah woodland on clay-loam soils of the alluvial plains of north-central NSW	95
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Riverine Yellow Box - River Red Gum tall grassy woodland of NSW South West Slopes and Riverina Bioregions	90
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Silvertop Stringybark montane forest	63
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Snow Gum / Manna Gum open-forest	77
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Snow Gum montane grassy woodland (Towarri)	20
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Yellow Box / White Box / Blakely's Red Gum open-woodland on loamy-clay alluvial flats and gentle slopes	90

Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Weeping Myall open woodland of the Darling Riverine Plains and Brigalow Belt South Bioregions	98
Central West	Sclerophyll Grassy Woodlands (CMA 3)	_3D	Weeping Myall open woodland of the Riverina and NSW South Western Slopes Bioregions	90
Central West	Semi-arid Woodlands (CMA 3)	_3F	Belah woodland on alluvial plains in central-north NSW	98
Central West	Semi-arid Woodlands (CMA 3)	_3F	Belah/Black Oak - Western Rosewood - Wilga woodland of central NSW including Cobar Peneplain Bioregion	33
Central West	Semi-arid Woodlands (CMA 3)	_3F	Black Box woodland on the floodplains mainly of the Darling Riverine Plains Bioregion.	60
Central West	Semi-arid Woodlands (CMA 3)	_3F	Brigalow - Belah woodland on alluvial often gilgaied clay soil mainly in the Brigalow Belt South Bioregion .	98
Central West	Semi-arid Woodlands (CMA 3)	_3F	Brigalow woodland on heavy clay flats	67
Central West	Semi-arid Woodlands (CMA 3)	_3F	Coolabah - River Coobah - Lignum woodland of frequently flooded channels mainly of the Darling Riverine Plains Bioregion	93
Central West	Semi-arid Woodlands (CMA 3)	_3F	Coolabah open woodland with chenopod/grassy ground cover on grey clays on higher floodplains	98
Central West	Semi-arid Woodlands (CMA 3)	_3F	Desert Bloodwood - Mulga low woodland of the semi-arid plains	17
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dirty Gum - Pilliga Box - Mugga Ironbark - Pine - Buloke shrubby open forest on sandy loam rises mainly in the Pilliga Peneplain	78
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dirty Gum tall woodland of alluvial sandy lenses (sand monkeys) mainly of the Darling Riverine Plain Bioregion	56
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dwyer's Red Gum - Currawang grassy mid-high woodland of central NSW	33
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dwyers Red Gum - Currawang low woodland mainly of the Cobar Peneplain Bioregion	25
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dwyer's Red Gum - Quinine Tree open woodland on igneous intrusive hills of the Macquarie River floodplain	21
Central West	Semi-arid Woodlands (CMA 3)	_3F	Dwyers Red Gum - White Cypress Pine - Currawang shrubby woodland mainly of the NSW South Western Slopes Bioregion	75
Central West	Semi-arid Woodlands (CMA 3)	_3F	Green Mallee - Black Cypress Pine tall mallee woodland on rises in central NSW	17
Central West	Semi-arid Woodlands (CMA 3)	_3F	Green Mallee - White Cypress Pine woodland on gravelly rises of central NSW	20
Central West	Semi-arid Woodlands (CMA 3)	_3F	Grey Mallee - White Cypress Pine woodland on rocky hills of the eastern Cobar Peneplain Bioregion	6
Central West	Semi-arid Woodlands (CMA 3)	_3F	Ironwood woodland of the semi-arid plains	20
Central West	Semi-arid Woodlands (CMA 3)	_3F	Mallee - Smooth-barked Coolabah woodland on red earth flats of the eastern Cobar Peneplain Bioregion	56
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box - Coolabah floodplain woodland on light clay soil mainly in the Darling Riverine Plain Bioregion	60
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box - Gum-barked Coolabah - White Cypress Pine shrubby woodland mainly in the Cobar Peneplain Bioregion	33
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box - White Cypress Pine shrubby woodland on red sandy loam soils mainly on stagnant alluvial plains	64
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box grassy woodland on flats mainly in the Cobar Peneplain and Murray-Darling Depression Bioregions	97
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box grassy/shrubby woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).	99
Central West	Semi-arid Woodlands (CMA 3)	_3F	Poplar Box-Mulga-Ironwood woodland on red loam soils on plains in the Cobar Peneplain and eastern Mulga Lands Bioregions	23
Central West	Semi-arid Woodlands (CMA 3)	_3F	Ridge mallee woodland on hills of meta-sediments and volcanics, eastern Cobar Peneplain Bioregion	25
Central West	Semi-arid Woodlands (CMA 3)	_3F	Sandplain mallee of central NSW	46
Central West	Semi-arid Woodlands (CMA 3)	_3F	Silver-leaved Ironbark - White Cypress Pine on alluvial sandy loam soils in central-north NSW	86
Central West	Semi-arid Woodlands (CMA 3)	_3F	Smooth-barked Coolabah on granite low hills in the eastern Cobar Peneplain Bioregion	20
Central West	Semi-arid Woodlands (CMA 3)	_3F	Smooth-barked Coolabah woodland on sedimentary substrates mainly in the Cobar Peneplain Bioregion	19
Central West	Semi-arid Woodlands (CMA 3)	_3F	Smooth-barked Coolibah - Mulga open woodland on gravelly ridges of the Cobar Peneplain Bioregion	12
Central West	Semi-arid Woodlands (CMA 3)	_3F	Tall bull mallee woodland on clayey soils of central NSW	75
Central West	Semi-arid Woodlands (CMA 3)	_3F	White Cypress Pine - Mulga low woodland on siliceous rocky ranges mainly of the Cobar Peneplain	19
Central West	Semi-arid Woodlands (CMA 3)	_3F	Whitewood open woodland of the subtropical sub-humid plains (BBS and eastern DRP Bioregions).	80

Central West	Semi-arid Woodlands (CMA 3)	_3F	Yellow Box woodland on sandy loam soils on alluvial plains mainly in the Darling Riverine Plain Bioregion	80
Central West	Semi-mesic Forests (CMA 3)	_3B2	Southern tableland semi-mesic forests	50
Central West	Swamp Sclerophyll Forests (CMA 3)	_3C	River Red Gum - Veined Swamp Wallaby Grass grassy tall woodland of depressions on floodplains and alluvial plains	99
Central West	Swamp Sclerophyll Forests (CMA 3)	_3C	River Red Gum low woodland of rocky gorges and creeks in the Cobar Peneplain	10
Central West	Swamp Sclerophyll Forests (CMA 3)	_3C	River Red Gum open forest and woodland mainly of the Darling Riverine Plains Bioregion	93
Central West	Swamp Sclerophyll Forests (CMA 3)	_3C	River Red Gum riverine woodlands and forests in the Nandewar and Brigalow Belt South Bioregions	99
Central West	Wet Sclerophyll Forests (CMA 3)	_3B1	Southern escarpment wet sclerophyll forests	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Blue Mountains Ridgetop Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Capertee Valley Dry Forest	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Castlereagh Scribbly Gum Woodland	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Coastal Foredune Scrub	40
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Coastal Sand Forest	40
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Coastal Sandstone Gully Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Coastal Sandstone Ridgetop Woodland	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Eastern Tablelands Dry Forest	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Elevated Gorge Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Escarpment Foothills Wet Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Hinterland Sandstone Gully Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Megalong-Tonalli Sandstone Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Narrabeen - Hawkesbury Ironbark Woodland	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Sandstone Riparian Scrub	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Shoalhaven Sandstone Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Sydney Hinterland Transition Woodland	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Tableland Low Woodland	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Tableland Ridge Forest	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Western Tablelands Dry Forest	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Wet Montane Sandstone Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub Forests (CMA 9)	_9E2	Wingecarribee-Burragorang Sandstone Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Burragorang Escarpment Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Burragorang Hillslope Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Burragorang -Nepean Hinterland Woodland	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Burragorang River Flat Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Burragorang Rocky Slopes Woodland	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests	_9E1	Castlereagh Ironbark Forest	99

	(CMA 9)			
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Castlereagh Shale-Gravel Transition Forest	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Castlereagh Swamp Woodland	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Cumberland Shale Sandstone Transition Forest	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Elevated Gorge Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Kowmung-Wollondilly Gorge Forest	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Kowmung-Wollondilly Grassy Gorge Woodland	29
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Sydney Shale-Ironstone Cap Forest	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Sydney Turpentine Ironbark Forest	99
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	White Box Woodland	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Wolgan Capertee Talus-slope Woodland	70
Hawkesbury/Nepean	Dry Sclerophyll Shrub/Grass Forests (CMA 9)	_9E1	Wollondilly-Shoalhaven Gorge Woodland	29
Hawkesbury/Nepean	Estuarine and Saline Wetlands (CMA 9)	_9K	Estuarine Mangrove Forest	70
Hawkesbury/Nepean	Estuarine and Saline Wetlands (CMA 9)	_9K	Estuarine Saltmarsh	70
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Blue Mountains – Shoalhaven Hanging Swamps	29
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Coastal Freshwater Lagoon	40
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Coastal Upland Swamp	29
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Shrubby Swamp Meadow	70
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Tableland Bog	70
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Tableland Lacustrine Herbfield	99
Hawkesbury/Nepean	Freshwater Wetlands (CMA 9)	_9J	Tableland Swamp Forest	70
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Blue Mountains Heath	9
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Coastal Rock Plate Heath	29
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Coastal Sandstone Plateau Heath	29
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Kanangra-Ti Willa Montane Heath	9
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Loombah Plateau Heath	9
Hawkesbury/Nepean	Heathlands (CMA 9)	_9G	Sandstone Cliff Soak	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Coastal Warm Temperate Rainforest	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Grey Myrtle Dry Rainforest	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Intermediate Temperate Rainforest	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Littoral Thicket	70
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Sandstone Scarp Warm Temperate Rainforest	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Subtropical Dry Rainforest	70
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Temperate Dry Rainforest	29
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Temperate Littoral Rainforest	70
Hawkesbury/Nepean	Rainforests (CMA 9)	_9A	Yarrawarra Temperate Rainforest	29
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Abercrombie – Tarlo Footslope Woodland	99
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Capertee Valley Woodland	99
Hawkesbury/Nepean	Sclerophyll Grassy	_9D	Cumberland Moist Shale Woodland	90

	Woodlands (CMA 9)			
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Cumberland Shale Hills Woodland	90
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Cumberland Shale Plains Woodland	90
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Frost Hollow Grassy Woodland	70
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Tableland Granite Grassy Woodland	70
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Tableland Grassy Box-Gum Woodland	99
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Tableland Hills Grassy Woodland	99
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Tableland Swamp Flats Forest	70
Hawkesbury/Nepean	Sclerophyll Grassy Woodlands (CMA 9)	_9D	Wombeyan Caves Woodland	99
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Cool Montane Wet Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	High Range Sheltered Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Lithgow-Abercrombie Grassy Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Nepean Shale Cap Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Shale-Basalt Sheltered Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Southern Highlands Basalt Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Tableland Basalt Forest	50
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Tableland Granite Grassy Woodland	70
Hawkesbury/Nepean	Semi-mesic Forests (CMA 9)	_9B2	Tableland Swamp Flats Forest	70
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Coastal Sand Swamp Forest	70
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Cumberland River Flat Forest	99
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Estuarine Fringe Forest	99
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Floodplain Swamp Forest	99
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	MacDonald Valley Flat Woodland	90
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Riverbank Forest	90
Hawkesbury/Nepean	Swamp Sclerophyll Forests (CMA 9)	_9C	Sydney Swamp Forest	70
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Blue Gum High Forest	40
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Blue Mountains Basalt Forest	29
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Central Coast Wet Forest	40
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Escarpment Foothills Wet Forest	29
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Lower Blue Mountains Wet Forest	40
Hawkesbury/Nepean	Wet Sclerophyll Forests (CMA 9)	_9B1	Warm Temperate Layered Forest	40
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	11 Blackbutt-Sydney Peppermint-Smoothbarked Apple	61
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	113 Peppermint	39
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	122 Rough-barked Apples	81
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	129 Smoothbarked Apple	27
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	130 Smoothbarked Apple-Sydney Peppermint-Stringybark	43
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	140 Stringybark-Mallee	0

Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	145 Sydney Peppermint-Stringybark	2
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	149 Mallee-Peppermint mosaic	37
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	175 Orange Gum-New England Blackbutt-Tumbledown Gum	41
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	177 Outcrop Orange Gum-New England Blackbutt	0
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	186 Open Tumbledown Gum-Black Cypress-Orange Gum	6
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	27 Coastal Sands Blackbutt	37
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	37 Dry Heathy Blackbutt-Bloodwood	43
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	38 Dry Heathy New England Blackbutt	9
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	39 Dry Heathy New England Stringybarks	0
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	74 Lowlands Scribbly Gum	10
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	97 Needlebark Stringybark-Large Fruited Blackbutt	11
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Broken Back Grey Gum - Stringybark Forest	3
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Coastal Plains Scribbly Gum Woodland	60
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Coastal Plains Smooth-barked Apple Woodland	36
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Coastal Sand Scrub	47
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Corymbia trachyphloia/ E.rossii Low Open Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	E.crebra/E.sideroxylon/E.punctata/E. fibrosa Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	E.maculata/E.crebra/Callitirs endlicheri Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Eucalyptus caleyi/ Corymbia trachyphloia/Acacia doratoxylon Woodland/Open Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Eucalyptus dwyeri/ E.oblonga/ E.caleyi/ E.punctata Low Open Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Eucalyptus fibrosa/ E. punctata Woodland/Open Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Eucalyptus punctata/E.dawsonii Woodland	40
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Exposed Hawkesbury Woodland	15
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Exposed Yellow Bloodwood Woodland	1
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Hunter Narrabeen Footslopes Expsoed Ironbark Woodland	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Kurri Sand Swamp Woodland	46
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	McDonald Exposed Ironbark Woodland	1
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Scribbly Gum - Dwarf Apple Woodland	1
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Sheltered Dry Hawkesbury Woodland	3
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Tomago Sand Swamp Woodland	36
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Upper Hunter Hills Narrabeen Exposed Stringybark-Ironbark Woodlands	5
Hunter/Central Rivers	Dry Sclerophyll Shrub Forests (CMA 8)	_8E2	Warkworth Sands Woodland	50
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	139 Stringybark-Apple	72
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	146 Tallowwood	32
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	35 Dry Grassy Stringybark	28

Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	42 Dry Redgum-Bloodwood-Apple	51
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	43 Dry Silvertop Stringybark-Apple	33
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	46 Eastern Red Gums	0
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	48 Escarpment Scribbly Gum-Apple	66
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	53 Gorge Grey Box	50
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	63 Grey Gum-Stringybark	43
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	93 Montane Stringybark-Gum	7
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	99 New England Stringybark-Blakelys Red Gum	83
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Central Hunter Ironbark -Spotted Gum - Grey Box Forest	90
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Coastal Sheltered Apple - Peppermint Forest	31
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Hunter Range Grey Gum Forest	13
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Lower Hunter Spotted Gum - Ironbark Forest	60
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Upper Hunter Hills Box-Ironbark-Redgum Woodland	40
Hunter/Central Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 8)	_8E1	Upper Hunter Hills Exposed Ironbark Woodland	40
Hunter/Central Rivers	Estuarine and Saline Wetlands (CMA 8)	_8K	77 Mangrove	70
Hunter/Central Rivers	Estuarine and Saline Wetlands (CMA 8)	_8K	Saltmarsh	70
Hunter/Central Rivers	Freshwater Wetlands (CMA 8)	_8J	Coastal Wet Sand Cyperoid Heath	11
Hunter/Central Rivers	Freshwater Wetlands (CMA 8)	_8J	Freshwater Wetland Complex	33
Hunter/Central Rivers	Freshwater Wetlands (CMA 8)	_8J	Sandstone Hanging Swamps and Heaths	1
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	56 Granite Mallee	48
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	76 Coastal Mallee	20
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	96 Natural Grassland	0
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Coastal Clay Heath	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Coastal Headland Complex	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Hawkesbury Coastal Banksia Woodland	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Heath	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Norah Head Endangered Woodland	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Scrub	30
Hunter/Central Rivers	Heathlands (CMA 8)	_8G	Wallum Clay Shrub Heath	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Acmena smithii Alliance (Floyd, 1990) (FE168 Rainforest)	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Argyodendron actinophyllum Alliance (Floyd, 1990) (FE168 Rainforest)	70
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Argyodendron trifoliatum Alliance (Floyd, 1990) (FE 168 Rainforest)	70
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Caldcluvia Alliance (Floyd, 1990) (FE 168 Rainforest)	70
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Catanospermum- Waterhousia floribunda Alliance (Floyd, 1990) (FE168 Rainforest)	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Ceratopetalum apetalum Alliance (Floyd, 1990) (FE168 Rainforest)	15
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Choricarpia- Backhousia spp. Alliance (Floyd, 1990) (FE168	30

			Rainforest)	
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Cupaniopsis anarcardiodes - Acmena spp. (Floyd, 1990) (FE 168 Rainforest)	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Dendrocnide - Ficus Alliance (Floyd, 1990) (FE168 Rainforest)	68
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Doryphora sassafras Alliance (Floyd, 1990) (FE168 Rainforest)	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Drypetes - Araucaria Alliance (Floyd, 1990) (FE168 Rainforest)	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Notelea microcarpa - Alectryon Microphyll Vine Thicket	30
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Nothofagus moorei Alliance (Floyd, 1990) (FE168 Rainforest)	10
Hunter/Central Rivers	Rainforests (CMA 8)	_8A	Tristania- Leptospermum Low forest and closed scrub (FE168 Rainforest, FE 151 Wattle)	30
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	114 Peppermint-Mountain/Manna Gum	18
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	131 Snow Gum	17
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	132 Snow Gum -Mountain/Manna Gum	11
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	133 Snow Gum-Black Sallee	15
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	163 Yellow Box-Blakely's Red Gum	80
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	183 Red Gum-Apple	12
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	190 Yellow Box-Grey Box-Red Gum	10
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	195 Apple-Manna Gum woodland	36
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	198 Silvertop Stringybark	0
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	2 Alpine Gum	31
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	21 Lowlands Grey Box	96
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	33 Dry Foothills Spotted Gum	49
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	Eucalyptus amplifolia Eastern Red Gum (FE46)	0
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	54 Grey Box-Red Gum-Grey Ironbark	80
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	73 Lowland Red Gum	0
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	79 Manna Gum-Stringybark	41
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	80 Manna Gum	25
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	99 New England Stringybark-Blakelys Red Gum	83
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	Central Hunter Grey Box- Ironbark Woodland	80
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	Hunter Footslopes Dawsons Box Woodland	40
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	Open Woodland	90
Hunter/Central Rivers	Sclerophyll Grassy Woodlands (CMA 8)	_8D	Upper Hunter White Box-Ironbark Woodland	90
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	107 Open Messmate-New England Blackbutt	19
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	108 Open Ribbon Gum	28
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	110 Open Silvertop Stringybark-Blue Gum	19
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	111 Open Silvertop Stringybark-Tallowwood	8
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	123 Roundleaved Gum	21
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	134 South Coast Shrubby Grey Gum	58
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	19 Central Mid Elevation Sydney Blue Gum	44
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	30 Diehard Stringybark-New England Blackbutt	14
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	32 Dry Foothills Blackbutt-Turpentine	34

Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	34 Dry Grassy Blackbutt-Tallowwood	55
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	36 Dry Grassy Tallowwood-Grey Gum	40
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	41 Dry Open New England Blackbutt	30
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	47 Escarpment Redgum	74
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	49 Escarpment Tallowwood-Bloodwood	21
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	6 Barrington Dry Shrubby New England Blackbutt-Blue Gum	13
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	60 Grassy New England Blackbutt-Tallowwood-Blue Gum	16
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	87 Mixed Tableland Stringybark-Gum Open Forest	21
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	Coastal Ranges Open Forest	22
Hunter/Central Rivers	Semi-mesic Forests (CMA 8)	_8B2	Dharug Roughbarked Apple Forest	7
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	112 Paperbark	51
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	120 River Oak	82
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	142 Swamp Mahogany	59
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	143 Swamp Oak	90
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	Hunter Floodplain Redgum Box Woodland	99
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	Melaleuca nodosa Melaleuca Scrub	58
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	Melaleuca sieberi / Gahnia clarkei Melaleuca Scrub	59
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	Redgum Rough Barked Apple Forest	76
Hunter/Central Rivers	Swamp Sclerophyll Forests (CMA 8)	_8C	Riparian Melaleuca Swamp Woodland	59
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	106 Open Coastal Brushbox	48
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	109 Open Shrubby Brushbox-Tallowwood	45
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	135 South Coast Tallowwood-Blue Gum	33
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	137 Southern Wet Sydney Blue Gum	28
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	138 Steel Box/Craven Grey Box	1
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	14 Brown Barrell	30
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	147 Turpentine	6
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	148 Very Wet New England Blackbutt-Tallowwood	0
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	15 Brown Barrell-Gum	21
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	153 Wet Coastal Tallowwood-Brushbox	30
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	154 Wet Flooded Gum-Tallowwood	29
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	155 Wet Foothills Blackbutt-Turpentine	16
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	156 Wet New England Blackbutt-Silvertop Stringybark	12
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	157 Wet Shrubby Brushbox-Tallowwood	16
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	162 Whitetopped Box	29
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	19 Central Mid Elevation Sydney Blue Gum	44
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	26 Coastal Flooded Gum	42
Hunter/Central Rivers	Wet Sclerophyll	_8B1	28 Cool Moist Messmate	26

	Forests (CMA 8)			
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	29 Corkwood-Crabapple and Mixed Stringybarks	10
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	67 High Elevation Ferny Blackbutt	8
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	68 High Elevation Messmate-Brown Barrell	15
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	69 High Elevation Moist Open Tallowwood-Blue Gum	11
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	7 Barrington Moist Blue Gum-White Mahogany	30
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	72 Low Relief Coastal Blackbutt	71
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	8 Barrington Wet New England Blackbutt-Blue Gum	32
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	81 Messmate	29
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	82 Messmate-Mountain Gum Forest	38
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	83 Mid Elevation Wet Blackbutt	5
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	84 Mid North Coast Wet Brushbox-Tallowwood-Blue Gum	8
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	88 Moist Escarpment New England Blackbutt	3
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	89 Moist Foothills Spotted Gum	36
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	91 Moist Open Escarpment White Mahogany	13
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	92 Moist Shrubby Stringybark-Gum	13
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	94 Mountain Gum-Brown Barrell	0
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	Sandstone Grey Myrtle Sheltered Forest	2
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	Sheltered Blue Gum Forest	10
Hunter/Central Rivers	Wet Sclerophyll Forests (CMA 8)	_8B1	Sheltered Rough Barked Apple Forest	16
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones	33
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Black Box grassy open woodland of rarely flooded depressions, south western NSW	50
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone	60
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Cotton Bush open shrubland of the semi-arid (warm) zone	0
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Dillon Bush (Nitre Bush) shrubland/grassland of the semi-arid and arid zones	0
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Giant Redburr low shrubland on alluvial plains of the semi-arid (warm) climate zone	0
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Narrow-leaved Hopbush-Scrub Turpentine-Senna shrubland of semi-arid sandplains and dunes.	0
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Old Man Saltbush shrubland mainly of the semi-arid (warm) climate zone (south western NSW)	90
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Pearl Bluebush low open shrubland of the arid and semi-arid plains	38
Lachlan	Arid and Semi-arid Shrublands (CMA 4)	_4L	Yarran shrubland on peneplains and alluvial plains of central-northern NSW	75
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Blue Mallee - Green Mallee - Bull Mallee very tall mallee shrubland	87
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Broombush - Green Mallee - Blue Mallee very tall shrubland	71
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Buloke - White Cypress Pine woodland mainly in the NSW SW Slopes Bioregion	97
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Dwyer's Red Gum - Currawang grassy mid-high woodland of central NSW	33
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Inland Grey Box - Black Cypress Pine shrubby woodland on stony slopes NSW South Western Slopes and Rvierina Bioregions	75
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Mugga Ironbark - Inland Grey Box - Pine tall woodland of the NSW South Western Slopes Bioregion	80
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Mugga Ironbark - White Cypress Pine woodland on sedimentary or metamorphic low rises in the temperate (hot summer) climate zone	86

Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Narrow-leaved Peppermint / Silvertop Ash Dry Forest	88
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Red Bloodwood / Hard-leaved Scribbly Gum coastal hinterland heathy forest	0
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Red Stringybark / Apple Box dry forest	52
Lachlan	Dry Sclerophyll Shrub Forests (CMA 4)	_4E2	Tablelands Red Stringybark open forest	87
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Kowmung Dry Shrub Forest	0
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Lower Snowy White Box / White Cypress Pine / Green Wattle woodland	98
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Mugga Ironbark woodland of Tableland Valleys	0
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Pilliga Box - Poplar Box- White Cypress Pine grassy open woodland on alluvial loams mainly of the temperate (hot summer) climate zone	93
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Shrubby White Box Woodland	98
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	Tablelands Red Stringybark open forest	87
Lachlan	Dry Sclerophyll Shrub/Grass Forests (CMA 4)	_4E1	White Cypress Pine woodland on sandy loam soils on the plains of central NSW (wheatbelt)	60
Lachlan	Estuarine and Saline Wetlands (CMA 4)	_4K	Disturbed annual saltbush forbland on clay plains and inundation zones of the arid and semi-arid climate zones	0
Lachlan	Estuarine and Saline Wetlands (CMA 4)	_4K	Slender Glasswort low shrubland in saline depressions in the semi-arid (warm) zone	40
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Broad-leaved Peppermint / Mountain Gum grassy forest	91
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Canegrass swamp of drainage depressions, playa lakes and pans of the inland plains	10
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Common Reed - Bushy Groundsel reedland/forbland of inland river systems	33
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Cumbungi rushland of shallow semi-permanent water bodies of the inland river systems	25
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Lignum shrubland of the semi-arid (warm) plains - mainly in the Riverina and Murray-Darling Depression Bioregions	97
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Nitre Goosefoot shrubland on clays of the inland floodplains	0
Lachlan	Freshwater Wetlands (CMA 4)	_4J	River Coobah tall shrubland of the floodplains in the Riverina and Murray-Darling Depression Bioregions	38
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Semi-permanent open freshwater wetlands of the inland slopes and plains	40
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Shallow marsh of regularly flooded depressions on floodplains in the semi-arid (warm) climatic zone	20
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Swamp grassland of the Riverine Plain	50
Lachlan	Freshwater Wetlands (CMA 4)	_4J	Tableland Alluvial Wetlands	91
Lachlan	Grasslands (CMA 4)	_4I	Couch Grass grassland on river banks and floodplains of inland river systems	17
Lachlan	Grasslands (CMA 4)	_4I	Curly Windmill Grass - speargrass - wallaby grass on alluvial clay and loam on the Hay Plain, Riverina Bioregion	20
Lachlan	Grasslands (CMA 4)	_4I	Derived corkscrew grass grassland/forbland on sandplains and plains in the semi-arid (warm) climate zone	0
Lachlan	Grasslands (CMA 4)	_4I	Derived tussock grasslands of the central western plains and lower slopes of NSW	0
Lachlan	Grasslands (CMA 4)	_4I	Plains Grass grassland on alluvial dark grey clays of central New South Wales	60
Lachlan	Grasslands (CMA 4)	_4I	Rat's Tail Couch sod grassland of inland floodplains	40
Lachlan	Grasslands (CMA 4)	_4I	Red-leg Grass / Kangaroo Grass tablelands dry grassland	98
Lachlan	Grasslands (CMA 4)	_4I	Tablelands wet grassland / woodland	99
Lachlan	Heathlands (CMA 4)	_4G	Northern Plateau Mallee Heath	0
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Blakely's Red Gum moist sedgey woodland	99
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Broad-leaved Peppermint / Mountain Gum grassy forest	91

Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Fuzzy Box - Inland Grey Box on alluvial brown loam soils of the NSW South Western Slopes Bioregion and southern BBS Bioregion.	94
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Grassy White Box Woodland	96
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Inland Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion	73
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Inland Grey Box - White Cypress Pine tall woodland on sandy loam soil on alluvial plains of NSW South-western Slopes and Riverina Bioregions	86
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Inland Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions	92
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Mixed box woodland on low sandy-loam rises on alluvial plains in central western NSW	80
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Mixed Eucalypt woodlands of floodplains in the southern-eastern Cobar Peneplain Bioregion	71
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Montane & Tableland Snow Gum Woodland	89
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Mountain Gum montane moist forest	0
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Poplar Box - Belah woodland on clay-loam soils of the alluvial plains of north-central NSW	70
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Red Stringybark / Apple Box dry forest	52
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Riverine Inland Grey Box grassy woodland of the semi-arid (warm) climate zone	67
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Riverine Yellow Box - River Red Gum tall grassy woodland of NSW South West Slopes and Riverina Bioregions	73
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Tablelands Snow Gum / Manna Gum Grassland / Woodland	99
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Tumbledown Red Gum / Red Box / Black Cypress Pine dry forest	62
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Weeping Myall open woodland of the Riverina and NSW South Western Slopes Bioregions	90
Lachlan	Sclerophyll Grassy Woodlands (CMA 4)	_4D	Yellow Box / White Box / Blakely's Red Gum grassy woodland	99
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Belah woodland on alluvial plains in central-north NSW	98
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Belah/Black Oak - Western Rosewood - Wilga woodland of central NSW including Cobar Peneplain Bioregion	33
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Black Box - Lignum woodland of the inner floodplains in the semi-arid (warm) climate zone	50
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Black Box open woodland with chenopod understorey mainly on the outer floodplains of the Riverina and Murray-Darling Depression Bioregions	50
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Black Oak - Western Rosewood open woodland on deep sandy loams of Murray-Darling Depression and Riverina Bioregions	44
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Black Roly Poly low open shrubland of the Riverina and Murray-Darling Depression Bioregions	0
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Brigalow open woodland on red earth and clay plains mainly in the Mulga Lands Bioregion	33
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Broombush shrubland in the mallee landscapes of the temperate and semi-arid (warm) climate zones	70
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones	30
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Dwyer's mallee - Black Cypress Pine - Currawang woodland of rocky hills of temperate (hot summer) climate zone	95
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Dwyers Red Gum - Currawang low woodland mainly of the Cobar Peneplain Bioregion	25
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Dwyers Red Gum - White Cypress Pine - Currawang shrubby woodland mainly of the NSW South Western Slopes Bioregion	20
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Green Mallee - Black Cypress Pine tall mallee woodland on rises in central NSW	17
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Green Mallee - White Cypress Pine woodland on gravelly rises of central NSW	20
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Grey Mallee - White Cypress Pine woodland on rocky hills of the eastern Cobar Peneplain Bioregion	6
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Ironwood woodland of the semi-arid plains	20
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Linear Dune Mallee mainly of the Murray-Darling Basin Bioregion	14
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Mallee - Smooth-barked Coolabah woodland on red earth flats of the eastern Cobar Peneplain Bioregion	56

Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Mallee Box open woodland	12
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Narrow-leaved Hopbush-Scrub Turpentine-Senna shrubland of semi-arid sandplains and dunes.	0
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Poplar Box - Gum-barked Coolabah - White Cypress Pine shrubby woodland mainly in the Cobar Peneplain Bioregion	33
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Poplar Box grassy woodland on flats mainly in the Cobar Peneplain and Murray-Darling Depression Bioregions	44
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Poplar Box grassy/shrubby woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).	73
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Red Stringybark - Dwyers Red Gum - Black Cypress Pine woodland on siiceous ranges in the south-eastern Cobar Peneplain Bioregion	20
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Ridge mallee woodland on hills of meta-sediments and volcanics, eastern Cobar Peneplain Bioregion	25
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Sandplain mallee of central NSW	46
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Smooth-barked Coolabah woodland on sedimentary substrates mainly in the Cobar Peneplain Bioregion	19
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Smooth-barked Coolibah - Mulga open woodland on gravelly ridges of the Cobar Peneplain Bioregion	12
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Tall bull mallee woodland on clayey soils of central NSW	75
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	White Cypress Pine - Mulga low woodland on siliceous rocky ranges mainly of the Cobar Peneplain	19
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	White Cypress Pine - Poplar Box woodland on footslopes and peneplains mainly in the Cobar Peneplain Bioregion	44
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	White Cypress Pine open woodland of sand plains, prior streams and dunes mainly of the semi-arid (warm) climate zone	72
Lachlan	Semi-arid Woodlands (CMA 4)	_4F	Yarran shrubland of the sandplains and plains of the semi-arid (warm) and arid climate zone plains	58
Lachlan	Semi-mesic Forests (CMA 4)	_4B2	Mountain Gum / Narrow-leaved Peppermint wet forest	82
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Oak Riparian Woodland	85
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum - Black Box woodland of the semi-arid (warm) climatic zone	43
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum - Blakely's Gum grassy woodland of the NSW South Western Slopes Bioregion	83
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum - herbaceous tall open forest of the Riverina and Murray Darling Depression Bioregions	18
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum - Lignum very tall open forest or woodland on floodplains of semi-arid (warm) climate zone	33
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum - Veined Swamp Wallaby Grass grassy tall woodland of depressions on floodplains and alluvial plains	62
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum low woodland of rocky gorges and creeks in the Cobar Peneplain	10
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	River Red Gum Riparian Grassy Forest	93
Lachlan	Swamp Sclerophyll Forests (CMA 4)	_4C	Yellow Box / White Box / Blakely's Red Gum grassy woodland	99
Lachlan	Wet Sclerophyll Forests (CMA 4)	_4B1	Mountain Gum / Narrow-leaved Peppermint wet forest	82
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Chenopod shrubland	2
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Grassland	2
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Herbland	1
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Hooked Needlewood - Needlewood - Mulga - Turpentine Bush open shrubland of the semi-arid and arid plains	33
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Horse Mulga - Umbrella Mulga shrubland on ranges in the arid and semi-arid climate zones	17
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Lignum Shrubland	12
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Mulga - Dead Finish on stony hills mainly of the Channel Country and Broken Hill Complex Bioregions	20
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Nelia tall open shrubland of semi-arid sandplains	60
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Prickly Wattle tall open shrubland of dunes and sandplains of semi-arid regions	50
Lower Murray/Darling	Arid and Semi-arid	_1L	Purple Wood wattle shrubland of the arid zone sandplains	50

	Shrublands (CMA 1)			
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Sandhill Wattle tall open shrubland on sand ridges in the arid zone	17
Lower Murray/Darling	Arid and Semi-arid Shrublands (CMA 1)	_1L	Sandplain Mulga tall open shrubland of the semi-arid and arid climate zones	40
Lower Murray/Darling	Freshwater Wetlands (CMA 1)	_1J	Canegrass community	14
Lower Murray/Darling	Freshwater Wetlands (CMA 1)	_1J	Sedge swamp	1
Lower Murray/Darling	Freshwater Wetlands (CMA 1)	_1J	Wetland	1
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Belah rosewood community	5
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Black box community	6
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Chenopod mallee	14
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Cypress community	4
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Deep sand mallee	1
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	East West Dune mallee	6
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Mallee mosaic	5
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Mixed shrubland	1
Lower Murray/Darling	Semi-arid Woodlands (CMA 1)	_1F	Yarran shrubland of the sandplains and plains of the semi-arid (warm) and arid climate zone plains	58
Lower Murray/Darling	Swamp Sclerophyll Forests (CMA 1)	_1C	Red box community	100
Lower Murray/Darling	Swamp Sclerophyll Forests (CMA 1)	_1C	Red gum community	4
Murray	Alpine Complex (CMA 10)	_10H	Sub-Alpine E. niphophila Woodlands (18)	1
Murray	Arid and Semi-arid Shrublands (CMA 10)	_10L	Alluvial Plains Chenopod Shrubland	15
Murray	Arid and Semi-arid Shrublands (CMA 10)	_10L	Chenopod Shrubland	98
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Eastern Tablelands Dry Forest / Woodland (21)	38
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Eastern Tablelands Dry Woodland (20)	43
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Iron Bark - Apple Box Open Forest	93
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Iron Bark - Grey Box - Red Gum Open Forest	40
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Iron Bark Dry Open Forest	87
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Kyeamba Granites Open Forest	74
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Montane Moist Forests (16)	51
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Rocky Scarps and Ranges Complex	11
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Slopes and Western Tablelands Dry Woodland (22)	50
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Stringy Bark - Gum Open Forest	71
Murray	Dry Sclerophyll Shrub Forests (CMA 10)	_10E2	Tableland Dry Shrublands (5a)	1
Murray	Dry Sclerophyll Shrub/Grass Forests (CMA 10)	_10E1	Coreinbob Hills Open Forest	91
Murray	Dry Sclerophyll Shrub/Grass Forests (CMA 10)	_10E1	Dry Foothill Forest	45
Murray	Dry Sclerophyll Shrub/Grass Forests (CMA 10)	_10E1	Eastern Rainshadow Woodland (24)	73
Murray	Dry Sclerophyll Shrub/Grass Forests (CMA 10)	_10E1	Kyeamba Granites Open Forest	96

Murray	Freshwater Wetlands (CMA 10)	_10J	Alpine Heath/Grassland complex (2)	7
Murray	Freshwater Wetlands (CMA 10)	_10J	Lignum / Chenopod Intermittent Swamp	17
Murray	Freshwater Wetlands (CMA 10)	_10J	Wetland Formation	72
Murray	Grasslands (CMA 10)	_10I	Slopes and Tablelands Moist Grasslands (27)	96
Murray	Grasslands (CMA 10)	_10I	Tablelands Dry Grasslands (25)	95
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Acacia Woodland	71
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Boree Woodland	96
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Floodplain Forest/Woodland	82
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Grey Box - Cypress Pine - Yellow Box Woodland	95
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Grey Box Woodland	91
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Montane/Tableland Moist Woodland (12)	14
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Parna Plains Grassland and Woodland	51
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Sub-Alpine E. pauciflora Woodlands	2
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Tableland Dry Woodlands (5b)	66
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Tablelands and Slopes Box-Gum Woodland (19)	93
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	Temperate Plains Grassy Woodland	90
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	White Box Woodland	97
Murray	Sclerophyll Grassy Woodlands (CMA 10)	_10D	White Cypress Pine-Yellow Box-Grey Box Woodland	92
Murray	Semi-arid Woodlands (CMA 10)	_10F	Floodplain (Black Box) Woodland	29
Murray	Semi-arid Woodlands (CMA 10)	_10F	Sandplain and Dunefield Mallee	56
Murray	Semi-arid Woodlands (CMA 10)	_10F	Semi-arid Loamy-sandplain Woodland	44
Murray	Semi-arid Woodlands (CMA 10)	_10F	Source Bordering Sands Woodland	50
Murray	Semi-mesic Forests (CMA 10)	_10B2	Moist Foothill Forest	20
Murray	Semi-mesic Forests (CMA 10)	_10B2	Montane Forests (15)	2
Murray	Semi-mesic Forests (CMA 10)	_10B2	Tableland Moist Forests (8a)	33
Murray	Swamp Sclerophyll Forests (CMA 10)	_10C	River Red Gum Forest	86
Murray	Swamp Sclerophyll Forests (CMA 10)	_10C	Riverine Forest / Woodland	16
Murray	Swamp Sclerophyll Forests (CMA 10)	_10C	Riverine Forest/Woodland	43
Murray	Swamp Sclerophyll Forests (CMA 10)	_10C	Tablelands Riparian Woodlands (26)	86
Murray	Wet Sclerophyll Forests (CMA 10)	_10B1	Tableland Wet/Moist Forests (8)	21
Murrumbidgee	Alpine Complex (CMA 11)	_11H	Sub-Alpine *E. niphophila* Woodlands (18)	1
Murrumbidgee	Arid and Semi-arid Shrublands (CMA 11)	_11L	Alluvial Plains Chenopod Shrubland	15
Murrumbidgee	Arid and Semi-arid Shrublands (CMA 11)	_11L	Bluebush Shrubland	5
Murrumbidgee	Arid and Semi-arid Shrublands (CMA 11)	_11L	Cottonbush Plains Grassy Shrubland	37
Murrumbidgee	Arid and Semi-arid Shrublands (CMA 11)	_11L	Old Man Saltbush Shrubland	10
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Box - Ironbark Forest with Callitris endlicheri	82
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Box - Ironbark Forest with Eucalyptus blakelyi	86

Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Cypress Pine Woodland	48
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Eastern Tablelands Dry Forest / Woodland (21)	38
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Eastern Tablelands Dry Woodland (20)	43
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Eucalyptus dealbata, E. dwyeri, Callitris glaucophylla, C. endlicheri Open Forest	48
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Iron Bark - Apple Box Open Forest	93
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Iron Bark - Grey Box - Red Gum Open Forest	40
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Iron Bark Dry Open Forest	87
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Kyeamba Granites Open Forest	74
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Montane Moist Forests (16)	51
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Rocky Scarps and Ranges Complex	11
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Slopes and Western Tablelands Dry Woodland (22)	50
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Stringy Bark - Gum Open Forest	71
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Tableland Dry Shrublands (5a)	1
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Tumbledown Gum-White Cypress Pine Open Forest	95
Murrumbidgee	Dry Sclerophyll Shrub Forests (CMA 11)	_11E2	Yabtree Open Forest	72
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Coreinbob Hills Open Forest	91
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Dry Foothill Forest	45
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Eastern Rainshadow Woodland (24)	73
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Kyeamba Granites Open Forest	96
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Mount Flackney Open Forest	86
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Wagga Wagga Hills Open Forest	97
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	Western Slopes Ironbark Woodlands (20x)	85
Murrumbidgee	Dry Sclerophyll Shrub/Grass Forests (CMA 11)	_11E1	White Box-White Cypress Pine-Grey Box Woodland	99
Murrumbidgee	Freshwater Wetlands (CMA 11)	_11J	Alpine Heath/Grassland complex (2)	7
Murrumbidgee	Freshwater Wetlands (CMA 11)	_11J	Canegrass Intermittent Swamp	4
Murrumbidgee	Freshwater Wetlands (CMA 11)	_11J	Lignum / Chenopod Intermittent Swamp	17
Murrumbidgee	Freshwater Wetlands (CMA 11)	_11J	Wetland Formation	72
Murrumbidgee	Grasslands (CMA 11)	_11I	Slopes and Tablelands Moist Grasslands (27)	96
Murrumbidgee	Grasslands (CMA 11)	_11I	Tablelands Dry Grasslands (25)	95
Murrumbidgee	Heathlands (CMA 11)	_11G	Tableland Casuarina Heath (3)	0
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Acacia Woodland	71
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Boree Woodland	96
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Eastern Tableland Moist Woodland on high altitude (7)	66
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Grey Box - Cypress Pine - Yellow Box Woodland	95

Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Grey Box Woodland	98
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Montane/Tableland Moist Woodland (12)	81
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Parna Plains Grassland and Woodland	51
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Sub-Alpine E. pauciflora Woodlands	2
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Tableland Dry Woodlands (5b)	66
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Tablelands and Slopes Box-Gum Woodland (19)	93
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Temperate Plains Grassy Woodland	90
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	White Box Woodland	97
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	White Cypress Pine-Yellow Box-Grey Box Woodland	92
Murrumbidgee	Sclerophyll Grassy Woodlands (CMA 11)	_11D	Yellow Box Woodland	98
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Black Box Woodland	94
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Colluvial Slopes (Bimble Box) Woodland	55
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Floodplain (Black Box) Woodland	29
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Sandplain and Dunefield Mallee	56
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Semi-arid Loamy-sandplain Woodland	44
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Shallow Sandplain Woodland	64
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Source Bordering Sands Woodland	50
Murrumbidgee	Semi-arid Woodlands (CMA 11)	_11F	Sub-humid Plains Woodland	86
Murrumbidgee	Semi-mesic Forests (CMA 11)	_11B2	Moist Foothill Forest	20
Murrumbidgee	Semi-mesic Forests (CMA 11)	_11B2	Montane Forests (15)	2
Murrumbidgee	Semi-mesic Forests (CMA 11)	_11B2	Tableland and Montane Dry Shrubby Woodland (5)	18
Murrumbidgee	Semi-mesic Forests (CMA 11)	_11B2	Tableland Moist Forests (8a)	33
Murrumbidgee	Semi-mesic Forests (CMA 11)	_11B2	Western Tablelands Dry Forest (22a)	29
Murrumbidgee	Swamp Sclerophyll Forests (CMA 11)	_11C	Plains (Red Gum) Wetland	12
Murrumbidgee	Swamp Sclerophyll Forests (CMA 11)	_11C	River Red Gum Forest	96
Murrumbidgee	Swamp Sclerophyll Forests (CMA 11)	_11C	Riverine Forest / Woodland	16
Murrumbidgee	Swamp Sclerophyll Forests (CMA 11)	_11C	Tablelands Riparian Woodlands (26)	86
Murrumbidgee	Wet Sclerophyll Forests (CMA 11)	_11B1	Southern Escarpment Wet Forests (9)	0
Murrumbidgee	Wet Sclerophyll Forests (CMA 11)	_11B1	Tableland Wet/Moist Forests (8)	21
Namoi	Arid and Semi-arid Shrublands (CMA 7)	_7L	Wal: Saltbush	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 106: Pilliga heath - Calytrix tetragona/Melaleuca uncinata/Acacia burrowii	38
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 107: Pilliga ironbark woodland - E. fibrosa/Acacia burrowii/Goodenia rotundifolia	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 108: Kaputar heath woodland - C. trachyphloia/Ozothamnus obcordatus	20
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 111: Warrumbungles shrubby cypress woodland - C. endlicheri/Cassinia quinquefaria/Olearia elliptica	46
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 112: Eastern grassy ironbark woodland - E. crebra/Digitaria ramularis/Microlaena stipoides	64
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 115: Bebo ironbark/angophora woodland - E. crebra/Angophora leiocarpa/Acacia leptoclada	70
Namoi	Dry Sclerophyll Shrub	_7E2	BBS 116: Warialda shrubby cypress woodland - C.	74

	Forests (CMA 7)		endlicheri/Melichrus urceolatus/Pultenaea sp.C	
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 119: North-eastern shrubby cypress/angophora woodland - C. endlicheri/Angophora leiocarpa/Melichrus urceolatus/Persoonia terminalis	55
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 123: Northern cypress grass/shrub woodland - C. endlicheri/Aristida caput-medusae/Acacia conferta	50
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 124: Goonoo ironbark woodland - E. crebra/E. sideroxylon/Austrodanthonia eriantha	69
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 126: Southern heath woodland - E. sparsifolia/Goodenia hederacea	59
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 128: Southern ironbark woodland - E. crebra/Joycea pallida/Pomax umbellata	39
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 129: Dapper ironbark woodland - E. sideroxylon/Astroloma humifusum	61
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 130: Goonoo ironbark heath woodland - E. nubila/Calytrix tetragona	56
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 134: Southern ironbark/cypress woodland - E. crebra/C. endlicheri/Austrodanthonia monticola/Acacia triptera	73
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 149: Southern Pilliga heathy cypress/bloodwood woodland - Callitris endlicheri/Corymbia trachyphloia/Persoonia cuspidifera	33
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 150: Southern Pilliga bloodwood woodland - Corymbia trachyphloia/E. rossii/Bossiaea rhombifolia	38
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 151: Pilliga NR heathy woodland - Corymbia trachyphloia/Persoonia sericea	23
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 152: Pilliga heathy woodland - C. trachyphloia/Allocasuarina diminuta	29
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 153: Pilliga heathy woodland - E. fibrosa/Dianella revoluta	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 154: Pilliga heathy woodland - C. trachyphloia/Acacia cheelii	36
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 156: Pilliga NR heathy woodland - C. trachyphloia/Cassinia arcuata	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 157: Binnaway cypress woodland - Callitris endlicheri/E. macrorhyncha/Persoonia cuspidifera	31
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 61:Basalt shrubby ironbark woodland - E. crebra/Olearia elliptica	48
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 62: North eastern shrubby ironbark/cypress woodland - E. melanophloia/Callitris glaucophylla/Leptospermum brevipes	43
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 63: North eastern gum woodland - E. dealbata/Plectranthus parviflorus/Calotis dentex	46
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 67: Pilliga ironbark/bull oak woodland - E. crebra/A. luehmannii/Lissanthe strigosa	39
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 71: Northern acacia woodland - Acacia spp./Alphitonia excelsa	62
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 84: Yetman spinifex woodland - Triodia mitchellii	64
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	BBS 85: Yetman spinifex woodland - Triodia scariosa	70
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	FE: 149 Mallee-Peppermint mosaic	10
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	FE: 182 Apple-Black Cypress	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	FE: 189 Silverleaved Ironbark-Cypress	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	FE: 197 Broad-leaved Stringybark	70
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	FE: 38 Dry Heathy New England Blackbutt	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 1: Black Pine Granite Outcrop Shrubby Woodland; tableland edge	39
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 100: McKies Stringybark/New England Blackbutt/Rough-barked Apple Grassy Open Forest; tableland edge	90
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 104: Mugga Ironbark/Stringybark Shrubby Open Forest; southern	85
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 111: Stringybark/Spinifex Serpentine Woodlands; scattered	19
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 112: Green Mallee Mallee Woodland; scattered	70
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 13: Black Pine/Rough-barked Apple/Stringybark Shrubby Open Forest; tableland edge	70
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 14: Orange Gum/Caley's Ironbark/Red Stringybark Shrub/Grass Open Forest; southern tableland edge	40
Namoi	Dry Sclerophyll Shrub	_7E2	Nd 16: New England Blackbutt/Youman's Stringybark Grassy	47

	Forests (CMA 7)		Open Forest; tableland edge	
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 17: Tumbledown Gum/Black Pine/Acacia cheelii Shrubby Open Forest; scattered	13
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 18: Tumbledown Red Gum/Dwyer's Red Gum Shrubby Woodland; western	16
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 2: Black Pine Granite Outcrop Shrubland/Open Woodland; tableland edge	52
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 20: Narrow-leaved Ironbark/Pine/Brown Bloodwood Shrub/Grass Open Forest; north-west	38
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 23: Black Pine/Northern Smooth-barked Apple Shrubby Open Forest; north-west	38
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 24: White Pine/Northern Smooth-barked Apple Shrubby Open Forest; north-west	67
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 28: Black Pine/Tumbledown Red Gum/Caley's Ironbark Shrub/Grass Open Forest; widespread	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 3: White Pine/Orange Gum/Acacia Granite Outcrop Shrubland; Moonbi	27
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 30: Tumbledown Red Gum/Caley's Ironbark Shrubby Open Forest; scattered	27
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 31: White Pine/Silver-leaved Ironbark/Tumbledown Red Gum Grassy Open Forest; far north	76
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 35: White Pine/Silver-leaved Ironbark/Tumbledown Red Gum Shrubby Open Forest; northern	17
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 4: Myrtle Shrubland (+- White Pine/Tumbledown Red Gum); Dripping Rock	7
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 45: White Pine/Narrow-leaved Ironbark Shrub/Grass Open Forest; south-west	55
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 63: Rough-barked Apple/Red Stringybark Shrubby Open Forest; widespread	68
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 64:Black Pine/White Box Shrubby Open Forest; Kaputar	40
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 65: White Box/Silver-top Stringybark/White Pine Shrubby Open Forest; southern hilly	46
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 68: Silver-top Stringybark/Rough-barked Apple/E. quiniorum Shrubby Open Forest; southern tableland edge	18
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 69: White Box/Rough-barked Apple Shrubby Open Forest; western	9
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 70: Narrow-leaved Ironbark/Black Pine Shrubby Open Forest; Kaputar	2
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 71: White Box Shrubby Open Forest; Melville Range	41
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 72: Mallee Woodland; Duri Peak	0
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 73: Narrow-leaved Ironbark/Tumbledown Red Gum Shrubby Open Forest; Melville Range	7
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 74: Nandewar Box/New England Blackbutt/Red Stringybark Shrub/Grass Open Forest; Kaputar	30
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 79: Silver-top Stringybark/Rough-barked Apple Grassy Open Forest; southern hills	67
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 8: Black Pine/Orange Gum/Tumbledown Red Gum Shrubby Open Forest; south-east	43
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 80: Rough-barked Apple/Silver-top Stringybark/Ribbon Gum Shrub/Grass Open Forest; far south	63
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 89: White Box/White Pine/Silver-leaved Ironbark Shrubby Open Forest; western	25
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 90: White Pine/Silver-leaved Ironbark Shrubby Woodland; nort-west	95
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 91: Rough-barked Apple/White Box/Rusty Fig Shrubby Open Forest; Kaputar	26
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Nd 97: Bendemeer White Gum/Silver-top Stringybark Grassy Open Forest; Kaputar and southern tableland edge	57
Namoi	Dry Sclerophyll Shrub Forests (CMA 7)	_7E2	Wal: Baradine Gum	70
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 20: Eastern Liverpool Range herb woodland - E. albens/Acaena novae-zelandiae	42
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 22: Pilliga cypress grass/herb woodland - Callitris glaucophylla/Austrodanthonia racemosa/Calotis lappulacea	74
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 25: Basalt slopes box woodland - E. albens/Poa sieberiana/Cassinia quinquefaria	63
Namoi	Dry Sclerophyll	_7E1	BBS 59: Warrumbungles cypress woodland - Callitris	61

	Shrub/Grass Forests (CMA 7)		glaucophylla/Notodanthonia longifolia	
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 60: Warrumbungles shrubby woodland - E. albens/E. macrorhyncha/Olearia elliptica	35
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 64: Pilliga cypress/bull oak woodland - Callitris glaucophylla/Allocasuarina luehmannii/Eragrostis lacunaria	54
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 65: Pilliga grassy cypress woodland - Callitris glaucophylla/Allocasuarina luehmannii/Digitaria diffusa	57
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 68: Pilliga cypress/box herb woodland - Callitris glaucophylla/E. populnea/Enchylaena tomentosa	62
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	BBS 70: Pilliga west grass/herb cypress woodland - Callitris glaucophylla/Austrostipa scabra/Evolvulus alsinoides	58
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 113 Peppermint	79
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 139 Stringybark-Apple	78
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 35 Dry Grassy Stringybark	35
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 48 Escarpment Scribbly Gum-Apple	40
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 53 Gorge Grey Box	78
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 63 Grey Gum-Stringybark	76
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	FE: 93 Montane Stringybark-Gum	79
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 105: Mugga Ironbark/Blakely's Red Gum Shrub/Grass Open Forest; Bingarra	61
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 113: Murrurundi Stringybark	70
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 29: White Pine/Tumbledown Red Gum/Caley's Ironbark Shrubby Open Forest; widespread	48
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 36: White Pine/White Box Shrub/Grass Open Forest; central	59
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 37: White Pine/White Box/Silver-leaved Ironbark Shrubby Open Forest; western	78
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 42: White Box Shrubby Open Forest; widespread	60
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 43: White Box/White Pine Shrubby Open Forest; southern	73
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Nd 66: Silver-top Stringybark/Orange Gum Shrubby Open Forest; Horton	59
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Wal: Cypress Pine	70
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Wal: White Cypress Pine	70
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Wal: White cypress Pine - Red Gum	70
Namoi	Dry Sclerophyll Shrub/Grass Forests	_7E1	Wal: White Cypress Pine Bull Oak Angophora Occasional Eucal	70

	(CMA 7)			
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Wal: White Cypress Pine Bull Oak mixed Eucalyptus spp.	70
Namoi	Dry Sclerophyll Shrub/Grass Forests (CMA 7)	_7E1	Wal: White Cypress Pine Pilliga Box	70
Namoi	Freshwater Wetlands (CMA 7)	_7J	BBS 176: Clay plain wet herbland - Marsilea drummondii/Eleocharis pallens/Sclerolaena muricata	70
Namoi	Freshwater Wetlands (CMA 7)	_7J	Nd 115: Swamp and Wetland	99
Namoi	Freshwater Wetlands (CMA 7)	_7J	Wal: Lignum	30
Namoi	Freshwater Wetlands (CMA 7)	_7J	Wal: Swamps Lagoons - Wetlands	70
Namoi	Grasslands (CMA 7)	_7I	BBS 169: Wet grassland - Marsilea drummondii/Bothriochloa biloba	95
Namoi	Grasslands (CMA 7)	_7I	BBS 171: Grassland - Austrostipa verticillata/Rhagodia spinescens	97
Namoi	Grasslands (CMA 7)	_7I	BBS 172: Northern clay plain grassland - Panicum buncei/Sporobolus creber/Tribulus micrococcus	96
Namoi	Grasslands (CMA 7)	_7I	BBS 174: Clay plain grassland - Enteropogon acicularis/Paspalidium constrictum	96
Namoi	Grasslands (CMA 7)	_7I	BBS 179: North western wet grassland - Paspalidium jubiflorum/Marsilea drummondii	97
Namoi	Grasslands (CMA 7)	_7I	BBS 183: Moree grassland - Chloris truncata/Solanum esuriale	96
Namoi	Grasslands (CMA 7)	_7I	BBS 184: Moree grassland - Austrostipa aristiglumis/Sporobolus elongatus	95
Namoi	Grasslands (CMA 7)	_7I	BBS 185: Moree grassland - Desmodium campylocaulon/Aristida leptopoda	97
Namoi	Grasslands (CMA 7)	_7I	BBS 187: Moree grassland - Eriochloa crebra/Panicum decompositum	93
Namoi	Grasslands (CMA 7)	_7I	BBS 190: Northern clay plain grassland - Bothrichloa decipiens/Asperula conferta	89
Namoi	Grasslands (CMA 7)	_7I	Nd 106: Weeping Myall Woodland/Shrubland; scattered	83
Namoi	Grasslands (CMA 7)	_7I	Nd 81: Redleg Grass Grassland/Open Woodland; western	85
Namoi	Grasslands (CMA 7)	_7I	Nd 82: Spear Grass/ Bluegrass Grassland/Open Woodland; central/southern	85
Namoi	Grasslands (CMA 7)	_7I	Nd 85: Plains Grass/Bluegrass Grassland; western	90
Namoi	Grasslands (CMA 7)	_7I	Wal: Native & naturalised grasslands	70
Namoi	Heathlands (CMA 7)	_7G	Nd 5: Shrublands; Kaputar Trachyte	9
Namoi	Rainforests (CMA 7)	_7A	BBS 192: Vine thicket - Cassine australis/Carissa ovata	81
Namoi	Rainforests (CMA 7)	_7A	BBS: Goulburn River NP Backhousia myrtifolia Rainforest API addition	34
Namoi	Rainforests (CMA 7)	_7A	BBS: Goulburn River NP Ficus rubiginosa, Alectryon sp. Acacia dangarensis Rainforest API addition	35
Namoi	Rainforests (CMA 7)	_7A	BBS: Towarri Acmena smithii, Daphnandra sp A, Alectryon subcinereus Rainforest API addition	35
Namoi	Rainforests (CMA 7)	_7A	BBS: Towarri BBS: Towarri Dapnandra sp. A, Eupomatia laurina, Cassine australis Rainforest API addition	35
Namoi	Rainforests (CMA 7)	_7A	Nd 107: Ooline Open or Closed Forest; scattered	23
Namoi	Rainforests (CMA 7)	_7A	Nd 51: Black Olive Berry Cool Temperate Rainforest; far south-east	10
Namoi	Rainforests (CMA 7)	_7A	Nd 92: Rusty Fig Dry Rainforest; scattered	10
Namoi	Rainforests (CMA 7)	_7A	Nd 93: Alectryon/Rusty Fig/Mock Olive Dry Rainforest; scattered	12
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 1: Towarri moist forest - E. dalrympleana/Rubus moluccanus	62
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 10: Coolah Tops montane wet shrubland - Leptospermum gregarium/Hydrocotyle peduncularis	8
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 17: Coolah Tops herb forest - E. laevopinea/Acaena novae-zelandiae	36
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 200: Northern box woodland - E. populnea/Casuarina cristata/Chloris truncata/Pycnosorus globosus	96
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 21: Coolah Tops grass/herb forest - E. laevopinea/Hydrocotyle laxiflora	30
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 31: Northern grassy cypress woodland - C. glaucophylla/Austrostipa verticillata	85
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 5: Towarri montane grassy woodland - E. pauciflora/Poa sieberiana/Stellaria flaccida	40
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 69: Liverpool Plains box woodland/grassland - E. microcarpa/Einadia nutans/Oxalis perennans	91
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 76: Northern cypress/bulloak woodland - Allocasuarina luehmannii/Callitris glaucophylla/Acacia deanei	55

Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 90: Northern Pilliga box woodland - E. pilligaensis/Aristida leichhardtiana	64
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 91: Southern grassy callitris woodland - C. glaucophylla/Austrostipa scabra	77
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 94: Shrubby box woodland - E. microcarpa/Austrodanthonia monticola	58
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	BBS 96:Western grassy box woodland - E. populnea/Enteropogon acicularis	81
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 114 Peppermint-Mountain/Manna Gum	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 131 Snow Gum	74
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 132 Snow Gum-Mountain/Manna Gum	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 179 Yellow Box - Broad-leaved Stringybark	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 181 Stringybark - Gum	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 195 Aple-Manna Gum woodland	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 196 Broad-leaved Stringybark - Apple Box	82
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 200 Broad-leaved Stringybark - Ribbon Gum	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 79 Manna Gum-Stringybark	30
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 80 Manna Gum	76
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	FE: 99 New England Stringybark-Blakely's Red Gum	90
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 15: Rough-barked Apple/Blakely's Red Gum Grassy Open Forest; central tableland edge	57
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 38: White Pine/White Box Grass/Forb Open Forest; widespread	81
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 39: White Box/White Pine Shrub/Grass Open Forest; central	64
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 44: White Box Grassy Open Forest; widespread (mainly southern)	85
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 46: White Pine/Silver-leaved Ironbark Grassy Open Forest; north-west	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 47: White Pine/Narrow-leaved Ironbark Shrub/Grass Open Forest; north-west	34
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 55: Blakely's Red Gum/Rough-barked Apple/Red Stringybark Grassy Open Forest; tableland edge	58
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 57: Yellow Box/Blakely's Red Gum Grassy Woodland; widespread	93
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 58: Rough-barked Apple Riparian Forb/Grass Open Forest; widespread	59
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 60: Blakely's Red Gum/Yellow Box Grassy Open Forest/Woodland; tablelands	85
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 67: Rough-barked Apple/Silver-top Stringybark/Red Stringybark Grassy Open Forest; tableland edge	38
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 84: White Pine/Silver-leaved Ironbark Shrub/Grass Open Forest; central	86
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 95: Bimble Box/White Pine Grassy Woodland; western	93
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Nd 99: Grey Box/Blakely's Red Gum/Yellow Box Grassy Open Forest; widespread	93
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Myall	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Myall - Rosewood	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Myall Rosewood - Whitewood	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Rosewood	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Rosewood - Coolibah	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Wilga	70
Namoi	Sclerophyll Grassy Woodlands (CMA 7)	_7D	Wal: Wilga - Leopardwood	70
Namoi	Semi-arid Woodlands	_7F	BBS 103: Goonoo mallee heath - E. viridis/Melaleuca uncinata	69

	(CMA 7)			
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 166: Floodplain woodland - E. coolabah/Einadia nutans/Eleocharis plana	92
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 167: Floodplain woodland - E. coolabah/Acacia stenophylla/Muehlenbeckia florulenta	89
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 193: Belah vine thicket - Casuarina cristata/Carissa ovata/Spartothamnella juncea	82
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 195: Northern belah - Casuarina cristata/Capparis lasiantha/Abutilon oxycarpum	94
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 196: Belah herb woodland - Casuarina cristata/Einadia nutans/E. coolabah	88
Namoi	Semi-arid Woodlands (CMA 7)	_7F	BBS 197: Belah wilga woodland - C. cristata/Geijera parviflora/Rhagodia spinescens	93
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Moree BVT 5. Black Box and Coolabah Floodplain Woodlands	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Nd 96: Brigalow Acacia Woodland; scattered	94
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Belah	90
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Black Box	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Black Box - Belah	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Black Box - Coolibah	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Brigalow	90
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Coolibah	30
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Coolibah - Belah	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Coolibah - Myall	30
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Coolibah/River Cooba	30
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Cypress Pine - Poplar box	42
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Eurah	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Leopardwood	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Piliga Box	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Pilliga Box Poplar Box	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Poplar Box	20
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Poplar Box - Budda	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Poplar Box - Coolibah	30
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Poplar Box - Leopardwood	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Poplar Box - Wilga	70
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Popular Box - Belah	30
Namoi	Semi-arid Woodlands (CMA 7)	_7F	Wal: Whitewood	70
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 108 Open Ribbon Gum	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 110 Open Silvertop Stringybark-Blue Gum	29
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 111 Open Silvertop Stringybark-Tallowwood	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 19 Central Mid Elevation Blue Gum	77
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 30 Diehard Stringybark-New England Blackbutt	43
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 41 Dry Open New England Blackbutt	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 47 Escarpment Red Gum	81

Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 60 Grassy New England Blackbutt-Tallowwood-Blue Gum	38
Namoi	Semi-mesic Forests (CMA 7)	_7B2	FE: 87 Mixed Tableland Stringybark Gum Open Forest	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	Nd 50: Mountain Gum/Messmate/Snow Gum Montane Open Forest; far south-east	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	Nd 75: Silver-top Stringybark/Nandewar Box Shrubby Open Forest; Kaputar mid elevation	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	Nd 76: Mountain Gum/Snow Gum Grassy Open Forest; Kaputar high elevation	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	Nd 77: Ribbon Gum/ Silver-top Stringybark Ferny Open Forest; Kaputar	30
Namoi	Semi-mesic Forests (CMA 7)	_7B2	Nd 78: Snow Gum/New England Peppermint Grassy Open Forest; tableland edge	61
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	BBS 137: Riparian bottlebrush woodland - Callistemon viminalis	87
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	BBS 143: Riparian red gum woodland - E. blakelyi/Leptospermum polygalifolium	49
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	BBS 178: Western floodplain woodland - E. largiflorens/Eleocharis pallens	89
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	BBS 2: Kaputar riparian woodland - Casuarina cunninghamiana/Stephania japonica	76
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Moree BVT 1. Red Gum Riverine Forest	70
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Nd 108: Paperbark Riparian Forb/Grass Low Closed Forest; widespread	17
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Nd 109: River Oak Riparian Open Forest; widespread	90
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Nd 110: River Red Gum Riparian Open Forest/Woodland; widespread	70
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Nd 49: Tea-tree Drainage Line Shrubland; scattered	66
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Nd 58: Rough-barked Apple Riparian Forb/Grass Open Forest; widespread	70
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Wal: River Cooba	70
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Wal: River Red Gum	70
Namoi	Swamp Sclerophyll Forests (CMA 7)	_7C	Wal: River Red Gum - Coolibah	70
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 14 Brown Barrell	79
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 15 Brown Barrell-Gum	70
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 156 Wet New England Blackbutt-Silvertop Stringybark	18
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 162 Whitetopped Box	81
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 28 Cool Moist Messmate	69
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 29 Corkwood-Crabapple and Mixed Stringybarks	30
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 68 High Elevation Messmate-Brown Barrell	62
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 69 High Elevation Moist Open Tallowwood-Blue Gum	30
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 8 Barrington Wet New England Blackbutt-Blue Gum	65
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 81 Messmate	74
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 84 Mid North Coast Wet Brushbox-Tallowwood-Blue Gum	19
Namoi	Wet Sclerophyll Forests (CMA 7)	_7B1	FE: 88 Moist Escarpment New England Blackbutt	30
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	113a Peppermint leuco granite	30
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	115 Red Bloodwood	14
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	12 Blue Mountain Ash	30
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	126 Sandstone Spotted Gum-Blackbutt	45
Northern Rivers	Dry Sclerophyll Shrub	_5E2	127 Sherwood Needlebark Stringybark	21

	Forests (CMA 5)			
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	129 Smoothbarked Apple	3
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	13 Blue-leaved Stringybark	10
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	140 Stringybark-Mallee	30
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	145 Sydney Peppermint-Stringybark	6
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	149 Mallee-Peppermint mosaic	44
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	174 Orange Gum-Tumbledown Gum-Apple	84
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	175 Orange Gum-New England Blackbutt-Tumbledown Gum	87
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	176 Orange Gum-Ironbark	89
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	177 Outcrop Orange Gum-New England Blackbutt	83
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	178 Outcrop Black Cypress-Tumbledown Gum	30
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	179 Yellow Box-Broad-leaved Stringybark	80
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	180 Western New England Blackbutt	71
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	181 Stringybark-Gum	70
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	184 Tumbledown Gum-Ironbark	94
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	186 Open Tumbledown Gum-Black Cypress-Orange Gum	90
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	189 Silverleaved Ironbark-Cypress	88
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	194 Round-leaved Gum wet heath	91
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	20 Clarence Lowland Needlebark Stringybark	14
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	23 Coast Range Bloodwood-Mahogany	66
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	27 Coastal Sands Blackbutt	31
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	3 Baileys Stringybark	25
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	37a Dry Heathy Blackbutt-Bloodwood Sandstone	38
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	37b Dry Heathy Blackbutt-Bloodwood Quaternary Sands	38
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	38 Dry Heathy New England Blackbut	6
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	39 Dry Heathy New England Stringybarks	2
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	40 Dry Heathy Sandstone Blackbutt	9
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	48 Escarpment Scribbly Gum-Apple	7
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	57 Highland Granite Stringybarks	34
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	65 Heathy Scribbly Gum	27
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	74 Lowlands Scribbly Gum	42
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	97 Needlebark Stringybark-Large Fruited Blackbutt	5
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	Angophora paludosa Rough barked Apple	15
Northern Rivers	Dry Sclerophyll Shrub Forests (CMA 5)	_5E2	Angophora robur Rough barked Apple	15
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	113b Peppermint non granite	68
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	119 Richmond Range Spotted Gum-Box	41

Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	128 Silverleaved Ironbark	30
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	139 Stringybark-Apple	27
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	146 Tallowwood	8
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	182 Apple-Black Cypress	94
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	200 Broad-leaved Stringybark-Ribbon Gum	71
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	21 Lowlands Grey Box	60
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	24 Clarence Lowlands Spotted Gum	49
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	25 Coast Range Spotted Gum-Blackbutt	30
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	33 Dry Foothills Spotted Gum	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	35 Dry Grassy Stringybark	20
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	41 Dry Open New England Blackbutt	52
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	42 Dry Redgum-Bloodwood-Apple	19
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	43 Dry Silvertop Stringybark-Apple	13
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	44 Dry open Redgum-Broad Leaved Apple	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	46 Eastern Red Gums	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	48 Escarpment Scribbly Gum-Apple	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	52 Foothill Grey Gum-Ironbark-Spotted Gum	21
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	53 Gorge Grey Box	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	55 Foothills Grey Gum-Spotted Gum	30
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	58 Gorge Grey Gum	11
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	59 Gorge Ironbark-Grey Gum	16
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	61 Grey Box-Ironbark	30
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	62 Grey Box-Northern Grey Gum	69
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	63 Grey Gum-Stringybark	6
Northern Rivers	Dry Sclerophyll	_5E1	70 High Elevation Open Spotted Gum	19

	Shrub/Grass Forests (CMA 5)			
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	93 Montane Stringybark-Gum	55
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	99 New England Stringybark-Blakelys Red Gum	15
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	Eucalyptus bancroftii Eastern Red Gums (FE46)	40
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	Eucalyptus crebra Ironbark (FE71)	69
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	Eucalyptus fibrosa Ironbark (FE71)	69
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	Eucalyptus ophitica Baryugil Serpentinite Open Forests	30
Northern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 5)	_5E1	Eucalyptus serpenticola - Eucalyptus nortonii Mallee Woodlands	40
Northern Rivers	Estuarine and Saline Wetlands (CMA 5)	_5K	125 Saltmarsh/Saltmarsh complex	70
Northern Rivers	Estuarine and Saline Wetlands (CMA 5)	_5K	Avicennia marina (FE77 Mangrove)	70
Northern Rivers	Estuarine and Saline Wetlands (CMA 5)	_5K	Bruguiera gymnorhiza (FE77 Mangrove)	70
Northern Rivers	Estuarine and Saline Wetlands (CMA 5)	_5K	Excaecaria agallocha (FE77 Mangrove)	70
Northern Rivers	Estuarine and Saline Wetlands (CMA 5)	_5K	Rhizophora stylosa (FE77 Mangrove)	70
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	199 Riparian Shrubland	83
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	Basalt Plateau Lagoons	70
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	Coastal Wet Heathland &Shrublands	70
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	Freshwater meadows/forblands	40
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	Upland Heath Swamps	30
Northern Rivers	Freshwater Wetlands (CMA 5)	_5J	Wallum Sedgeland, and Rushlands	70
Northern Rivers	Grasslands (CMA 5)	_5I	Natural Grasslands	70
Northern Rivers	Heathlands (CMA 5)	_5G	22 Coast Cypress Pine	40
Northern Rivers	Heathlands (CMA 5)	_5G	56 Granite Mallee	10
Northern Rivers	Heathlands (CMA 5)	_5G	76 Coastal Mallee	39
Northern Rivers	Heathlands (CMA 5)	_5G	Banksia Dry Sclerophyll Shrubland(FE5 Banksia)	70
Northern Rivers	Heathlands (CMA 5)	_5G	Coastal Headland Heaths	1
Northern Rivers	Heathlands (CMA 5)	_5G	Graminoid Clay Heaths	29
Northern Rivers	Heathlands (CMA 5)	_5G	Northern Montane Heaths	10
Northern Rivers	Heathlands (CMA 5)	_5G	Themeda australis sod tussock grassland (FE96 Natural Grassland)	30
Northern Rivers	Rainforests (CMA 5)	_5A	Argyodendron actinophyllum Alliance (Floyd, 1990) (FE168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Argyodendron trifoliatum Alliance (Floyd, 1990) (FE 168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Caldcluvia Alliance (Floyd, 1990) (FE 168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Catanospermum- Waterhousia floribunda Alliance (Floyd, 1990) (FE168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Ceratopetalum apetalum Alliance (Floyd, 1990) (FE168 Rainforest)	30
Northern Rivers	Rainforests (CMA 5)	_5A	Choricarpia- Backhousia spp. Alliance (Floyd, 1990) (FE168 Rainforest)	29
Northern Rivers	Rainforests (CMA 5)	_5A	Cupaniopsis anarcardiodes - Acmena spp. (Floyd, 1990) (FE 168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Dendrocnide - Ficus Alliance (Floyd, 1990) (FE168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Doryphora sassafras Alliance (Floyd, 1990) (FE168 Rainforest)	70
Northern Rivers	Rainforests (CMA 5)	_5A	Drypetes - Araucaria Alliance (Floyd, 1990) (FE168 Rainforest)	29
Northern Rivers	Rainforests (CMA 5)	_5A	Eucryphia moorei Alliance (Floyd, 1990) (FE168 Rainforest)	9

Northern Rivers	Rainforests (CMA 5)	_5A	Notelea microcarpa - Alectryon Microphyll Vine Thicket	90
Northern Rivers	Rainforests (CMA 5)	_5A	Nothofagus moorei Alliance (Floyd, 1990) (FE168 Rainforest)	9
Northern Rivers	Rainforests (CMA 5)	_5A	Tristania- Leptospermum Low forest and closed scrub (FE168 Rainforest, FE 151 Wattle)	70
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	10 Black Sallee	70
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	114 Peppermint-Mountain/Manna Gum	75
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	116 Red Gum-Stringybark	93
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	131 Snow Gum	41
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	132 Snow Gum -Mountain/Manna Gum	82
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	133 Snow Gum-Black Sallee	70
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	163 Yellow Box-Blakely's Red Gum	92
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	17 Candlebark	73
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	183 Red Gum-Apple	95
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	190 Yellow Box-Grey Box-Red Gum	93
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	195 Apple-Manna Gum woodland	91
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	196 Broad-leaved Stringybark-Apple Box	88
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	197 Broad-leaved Stringybark	89
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	198 Silvertop Stringybark	74
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	2 Alpine Gum	73
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	21 Lowlands Grey Box	60
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	24 Clarence Lowlands Spotted Gum	49
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	54 Grey Box-Red Gum-Grey Ironbark	45
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	73 Lowland Red Gum	59
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	75 Lowlands Spotted Gum-Box	47
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	79 Manna Gum-Stringybark	56
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	80 Manna Gum	78
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	99 New England Stringybark-Blakelys Red Gum	90
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	Eucalyptus amplifolia Eastern Red Gum (FE46)	40
Northern Rivers	Sclerophyll Grassy Woodlands (CMA 5)	_5D	Eucalyptus seeana Eastern Red Gum (FE46)	40
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	100 Northern Grassy Sydney Blue Gum	18
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	101 Northern Open Grassy Blackbutt	29
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	102 Northern Ranges Dry Tallowwood	43
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	107 Open Messmate-New England Blackbutt	41
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	108 Open Ribbon Gum	30
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	110 Open Silvertop Stringybark-Blue Gum	24
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	111 Open Silvertop Stringybark-Tallowwood	7
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	117 Red Mahogany	5
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	123 Roundleaved Gum	48

Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	134 South Coast Shrubby Grey Gum	19
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	30 Diehard Stringybark-New England Blackbutt	19
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	31 Dorrigo White Gum	56
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	32 Dry Foothills Blackbutt-Turpentine	29
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	34 Dry Grassy Blackbutt-Tallowwood	54
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	36 Dry Grassy Tallowwood-Grey Gum	32
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	41 Dry Open New England Blackbutt	52
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	47 Escarpment Redgum	49
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	49 Escarpment Tallowwood-Bloodwood	9
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	51 Eurabbie	2
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	60 Grassy New England Blackbutt-Tallowwood-Blue Gum	15
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	86 Mixed New England Stringybarks	9
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	87 Mixed Tableland Stringybark-Gum Open Fores	70
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	90 Moist Messmate-Gum	15
Northern Rivers	Semi-mesic Forests (CMA 5)	_5B2	98 New England Peppermint	30
Northern Rivers	Swamp Sclerophyll Forests (CMA 5)	_5C	120 River Oak	90
Northern Rivers	Swamp Sclerophyll Forests (CMA 5)	_5C	142 Swamp Mahogany	70
Northern Rivers	Swamp Sclerophyll Forests (CMA 5)	_5C	143 Swamp Oak	72
Northern Rivers	Swamp Sclerophyll Forests (CMA 5)	_5C	Floodplain sedgelands, rushlands, and forblands	70
Northern Rivers	Swamp Sclerophyll Forests (CMA 5)	_5C	Paperbark Swamp Sclerophyll Forest	70
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	103 Northern Wet Brushbox	35
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	104 Northern Wet Tallowwood-Blue Gum	13
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	105 Nymboida Tallowwood-Turpentine	12
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	106 Open Coastal Brushbox	36
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	109 Open Shrubby Brushbox-Tallowwood	26
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	118 Richmond Range Spotted Gum	54
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	124 Roundleaved Gum-Turpentine	2
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	135 South Coast Tallowwood-Blue Gum	31
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	138 Steel Box/Craven Grey Box	32
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	14 Brown Barrell	51
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	147 Turpentine	55
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	148 Very Wet New England Blackbutt-Tallowwood	7
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	15 Brown Barrell-Gum	61
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	150 Washpool Brushbox-Tallowwood	30
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	152 Wet Bloodwood-Tallowwood	38
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	153 Wet Coastal Tallowwood-Brushbox	41
Northern Rivers	Wet Sclerophyll	_5B1	154 Wet Flooded Gum-Tallowwood	55

	Forests (CMA 5)			
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	155 Wet Foothills Blackbutt-Turpentine	6
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	156 Wet New England Blackbutt-Silvertop Stringybark	71
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	157 Wet Shrubby Brushbox-Tallowwood	15
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	158 Wet Spotted Gum-Tallowwood	40
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	162 Whitetopped Box	48
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	19 Central Mid Elevation Sydney Blue Gum	58
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	26 Coastal Flooded Gum	38
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	28 Cool Moist Messmate	66
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	29 Corkwood-Crabapple and Mixed Stringybarks	15
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	45 Dunns White Gum	34
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	67 High Elevation Ferny Blackbutt	13
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	68 High Elevation Messmate-Brown Barrell	74
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	69 High Elevation Moist Open Tallowwood-Blue Gum	9
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	72 Low Relief Coastal Blackbutt	48
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	78 Mann River Wet New England Blackbutt	30
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	8 Barrington Wet New England Blackbutt-Blue Gum	50
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	81 Messmate	75
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	82 Messmate-Mountain Gum Forest	84
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	83 Mid Elevation Wet Blackbutt	12
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	84 Mid North Coast Wet Brushbox-Tallowwood-Blue Gum	28
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	88 Moist Escarpment New England Blackbutt	30
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	89 Moist Foothills Spotted Gum	40
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	91 Moist Open Escarpment White Mahogany	5
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	92 Moist Shrubby Stringybark-Gum	30
Northern Rivers	Wet Sclerophyll Forests (CMA 5)	_5B1	95 Northern Moist Blackbutt	17
Southern Rivers	Alpine Complex (CMA 12)	_12H	Sub-Alpine E. niphophila Woodlands (18)	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Acacia Scrub	2
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Batemans Bay Foothills Dry Forest	6
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Braidwood Dry Forest	31
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Budderoo-Morton Plateau Forest	24
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Clyde-Deua Open Forest	5
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Clyde-Deua Ridgetop Forest	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Dry Shrub Forest	2
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Foothills Dry Shrub Forest	5
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Range Dry Shrub Forest	2
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Sand Forest	39

Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Sandstone Gully Forest	32
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Sandstone Ridgetop Woodland	16
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Scrub & Beach Strand	38
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Coastal Shrub/Grass Dry Forest - E. botryoides / E. globoidea / Imperata cylindrica	27
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Deua Ryolite Dry Shrub Forest - E. stenostoma	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Dune Dry Shrub Forest	48
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Eastern Deua Dry Shrub Forest - Angophora costata	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Eastern Tablelands Dry Forest	31
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Eastern Tablelands Dry Forest / Woodland (21)	38
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Eastern Tablelands Dry Woodland (20)	43
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Eden Dry Shrub Forest	4
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Foothills Dry Shrub Forest	2
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Genoa Dry Shrub Forest	19
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Hinterland Sandstone Gully Forest	16
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Lowland Dry Shrub Forest	7
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Montane Moist Forests (16)	51
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Morton Sandstone Heath Woodland	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Morton-Budawang Sandstone Woodland	7
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Morton-Mogo Dry Forest	6
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Mountain Dry Shrub Forest	5
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Mountain Intermediate Shrub Forest	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Mountain Sandstone Shrub Forest	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Mumbulla Dry Shrub Forest	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Myanba Dry Scrub Forest	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Numeralla Dry Shrub Woodland	30
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Rocky Tops Dry Scrub Forest	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Sandstone Dry Shrub Forest	27
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Sandstone Riparian Scrub	2
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Shoalhaven Sandstone Forest	17
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Slopes and Western Tablelands Dry Woodland (22)	50
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Tableland Dry Shrub Forest	43
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Tableland Dry Shrublands (5a)	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Tableland Low Woodland	58
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Tableland Ridge Forest	15
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Timbillica Dry Shrub Forest	1
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Wadbilliga Dry Shrub Forest	0
Southern Rivers	Dry Sclerophyll Shrub	_12E2	Wadbilliga Gorge Dry Forest	6

	Forests (CMA 12)			
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Wadbilliga Heath Forest	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Wadbilliga Range Shrub Forest	0
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Western Tablelands Dry Forest	47
Southern Rivers	Dry Sclerophyll Shrub Forests (CMA 12)	_12E2	Yalwal Shale-Sandstone Transition Forest	7
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Bungonia Slates Woodland	6
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Castlereagh Shale-Gravel Transition Forest	45
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Dry Foothill Forest	45
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Eastern Rainshadow Woodland (24)	73
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Elevated Gorge Forest	19
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Escarpment Dry Grass Forest	36
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Ettrema Gorge Forest	0
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Hinterland Dry Grass Forest	16
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Inland Intermediate Shrub Forest	2
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Nalbaugh Dry Grass Forest	26
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Waalimma Dry Grass Forest	1
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Wallagaraugh Dry Grass Forest	43
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Wog Wog Dry Grass Forest	29
Southern Rivers	Dry Sclerophyll Shrub/Grass Forests (CMA 12)	_12E1	Wollondilly-Shoalhaven Gorge Woodland	51
Southern Rivers	Estuarine and Saline Wetlands (CMA 12)	_12K	Estuarine Mangrove Forest	60
Southern Rivers	Estuarine and Saline Wetlands (CMA 12)	_12K	Estuarine Saltmarsh	28
Southern Rivers	Estuarine and Saline Wetlands (CMA 12)	_12K	Estuarine Wetland Scrub	68
Southern Rivers	Estuarine and Saline Wetlands (CMA 12)	_12K	Saltmarsh	31
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Alpine Heath/Grassland complex (2)	7
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Blue Mtns - Morton Hanging Swamps	3
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Booderee Heath Swamp	15
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Coastal Upland Swamp	13
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Hinterland Heath	0
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Lowland Swamp	6
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Shoalhaven Riparian Scrub	62

Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Shrubby Swamp Meadow	78
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Sub-Alpine Bog	77
Southern Rivers	Freshwater Wetlands (CMA 12)	_12J	Tableland Bog	31
Southern Rivers	Grasslands (CMA 12)	_12I	Monaro Grassland	90
Southern Rivers	Grasslands (CMA 12)	_12I	Slopes and Tablelands Moist Grasslands (27)	96
Southern Rivers	Grasslands (CMA 12)	_12I	Tablelands Dry Grasslands (25)	95
Southern Rivers	Heathlands (CMA 12)	_12G	Basalt Hilltop Scrub	32
Southern Rivers	Heathlands (CMA 12)	_12G	Beecroft Peninsula Heath	9
Southern Rivers	Heathlands (CMA 12)	_12G	Coastal Foredune Scrub	64
Southern Rivers	Heathlands (CMA 12)	_12G	Coastal Headland Heathlands	53
Southern Rivers	Heathlands (CMA 12)	_12G	Coastal Lowland Heath	7
Southern Rivers	Heathlands (CMA 12)	_12G	Coastal Sandplain Heath	18
Southern Rivers	Heathlands (CMA 12)	_12G	Coastal Sandstone Plateau Heath	11
Southern Rivers	Heathlands (CMA 12)	_12G	Littoral Thicket	69
Southern Rivers	Heathlands (CMA 12)	_12G	Montane Heath	8
Southern Rivers	Heathlands (CMA 12)	_12G	Morton Mallee-Heath	1
Southern Rivers	Heathlands (CMA 12)	_12G	Mountain Rock Scrub	0
Southern Rivers	Heathlands (CMA 12)	_12G	Mt Nadgee Heath	0
Southern Rivers	Heathlands (CMA 12)	_12G	Sandstone Headland Scrub	18
Southern Rivers	Heathlands (CMA 12)	_12G	Tableland Casuarina Heath (3)	0
Southern Rivers	Heathlands (CMA 12)	_12G	Upper Shoalhaven Montane Heath	6
Southern Rivers	Rainforests (CMA 12)	_12A	Budderoo Temperate Rainforest	10
Southern Rivers	Rainforests (CMA 12)	_12A	Clyde-Deua Cool Temperate Rainforest	0
Southern Rivers	Rainforests (CMA 12)	_12A	Coastal Warm Temperate Rainforest	6
Southern Rivers	Rainforests (CMA 12)	_12A	Coastal Warm Temperate RF (Eden CRA)	1
Southern Rivers	Rainforests (CMA 12)	_12A	Cool Temperate Rainforest	3
Southern Rivers	Rainforests (CMA 12)	_12A	Grey Myrtle Dry Rainforest	13
Southern Rivers	Rainforests (CMA 12)	_12A	Hinterland Warm Temperate RF	1
Southern Rivers	Rainforests (CMA 12)	_12A	Intermediate Temperate Rainforest	51
Southern Rivers	Rainforests (CMA 12)	_12A	Sandstone Scarp Warm Temperate Rainforest	2
Southern Rivers	Rainforests (CMA 12)	_12A	Subtropical Complex Rainforest	27
Southern Rivers	Rainforests (CMA 12)	_12A	Subtropical Dry Rainforest	79
Southern Rivers	Rainforests (CMA 12)	_12A	Temperate Dry Rainforest	1
Southern Rivers	Rainforests (CMA 12)	_12A	Temperate Littoral Rainforest	27
Southern Rivers	Rainforests (CMA 12)	_12A	Yarrawarra Temperate Rainforest	49
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Bega Dry Grass Forest	86
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Bega Wet Shrub Forest	63
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Brogo Wet Vine Forest	44
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Candelo Dry Grass Forest	91
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Eastern Tableland Moist Woodland on high altitude (7)	66
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Frost Hollow Grassy Woodland	94
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Illawarra Lowland Woodland	90
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Kydra Flats Grass Forest	8
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Monaro Basalt Grass Woodland	84
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Monaro Dry Grass Forest	30
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Montane/Tableland Moist Woodland (12)	81
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	South Coast Grassy Woodland	59
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Southern Tableland Flats Forest	73
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Subalpine Dry Shrub Forest	71
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Sub-Alpine E. pauciflora Woodlands	2
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tableland Basalt Forest	88
Southern Rivers	Sclerophyll Grassy	_12D	Tableland Dry Woodlands (5b)	66

	Woodlands (CMA 12)			
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tableland Granite Grassy Woodland	88
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tableland Grassy Box-Gum Woodland	91
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tableland Hills Grassy Woodland	78
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tableland Swamp Flats Forest	82
Southern Rivers	Sclerophyll Grassy Woodlands (CMA 12)	_12D	Tablelands and Slopes Box-Gum Woodland (19)	93
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Batemans Bay Cycad Forest	10
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Coastal Gully Shrub Forest	13
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Currambene-Batemans Lowlands Forest	40
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Montane Forests (15)	2
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Murramarang Lowlands Forest	30
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Southern Coastal Lowlands Shrub/Grass Dry Forest - E. globoidea / E. longifolia	9
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Southern Lowland Wet Forest	9
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Southern Scarp Ash Forest	0
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Southern Turpentine Forest	10
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Sydney Shale-Ironstone Cap Forest	8
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Tableland and Montane Dry Shrubby Woodland (5)	18
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Tableland Moist Forests (8a)	33
Southern Rivers	Semi-mesic Forests (CMA 12)	_12B2	Tallaganda Wet Forest	2
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Coastal Sand Swamp Forest	38
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Estuarine Creekflat Scrub	46
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Estuarine Fringe Forest	80
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Floodplain Swamp Forest	89
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Floodplain Wetlands	66
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Northern Riparian Scrub	52
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Riverbank Forest	24
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Riverine Forest	43
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	South Coast River Flat Forest	28
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Southern Riparian Scrub	10
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Swamp Forest	12
Southern Rivers	Swamp Sclerophyll Forests (CMA 12)	_12C	Tablelands Riparian Woodlands (26)	86
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Basalt Wet Herb Forest	23
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Clyde Gully Wet Forest	7
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Cool Montane Wet Forest	22
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Escarpment Foothills Wet Forest	5
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Flats Wet Herb Forest	18
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	High Mountain Wet Layered Forest	20

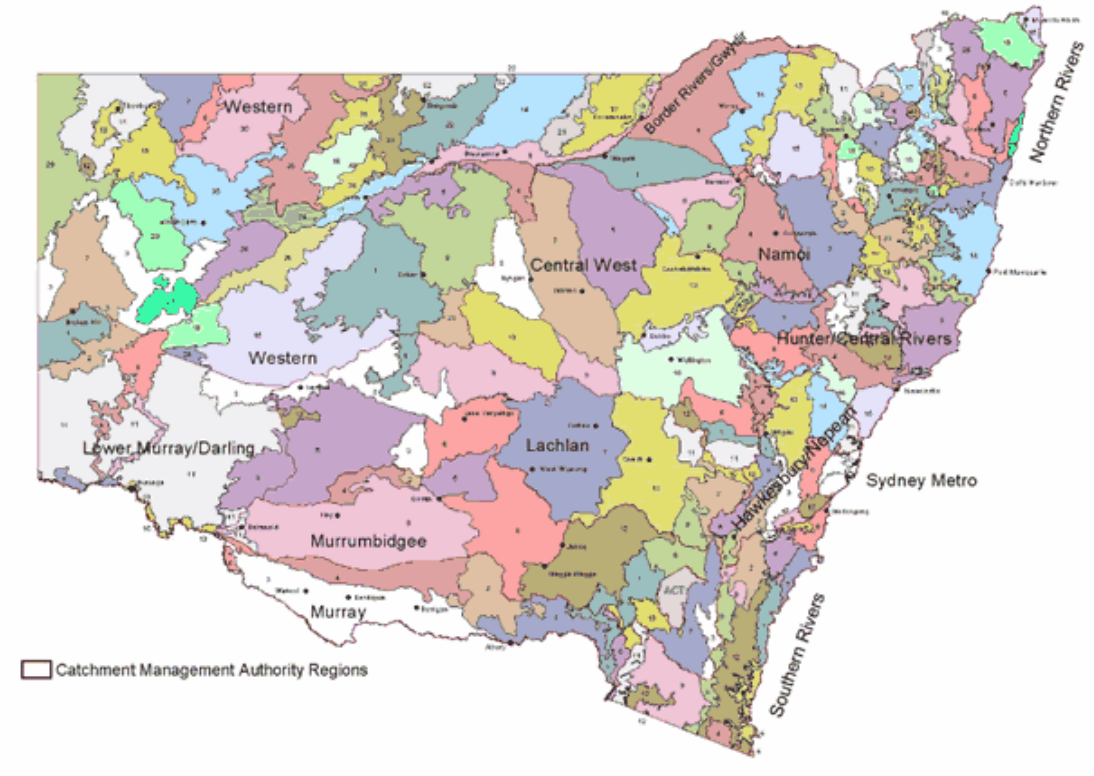
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	High Range Sheltered Forest	6
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Hinterland Wet Fern Forest	6
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Hinterland Wet Shrub Forest	4
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Illawarra Gully Wet Forest	47
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Lowland Gully Shrub Forest	6
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Mountain Wet Fern Forest	2
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Mountain Wet Herb Forest	26
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Mountain Wet Layered Forest	10
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Shale-Basalt Sheltered Forest	87
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Southern Escarpment Wet Forests (9)	0
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Southern Highlands Basalt Forest	69
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Southern Ranges Wet Forest	6
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Tableland Wet/Moist Forests (8)	21
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Tantawangalo Wet Shrub Forest	0
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Wadbilliga River Valley Forest	0
Southern Rivers	Wet Sclerophyll Forests (CMA 12)	_12B1	Warm Temperate Layered Forest	47
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Bastard Mulga - Mulga tall open shrubland of the semi-arid (hot) and arid climate zones	20
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones	33
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Black Box - Gidgee - chenopod low open woodland on alluvial clay soils mainly of the Darling Riverine Plain Bioregion	33
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Black Oak - Western Rosewood - bluebush/saltbush low sparse woodland on gravelly downs in the arid climate zone	17
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Black Roly Poly low open shrubland of the Riverina and Murray-Darling Depression Bioregions	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Bladder Saltbush chenopod shrubland on alluvial soils mainly in the Darling Riverine Plain Bioregion.	80
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Bladder Saltbush shrubland on stony plains and downs of the arid zone	50
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Bluebush shrubland on stony rises and downs of the arid zone	40
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Broombush shrubland in dunefields of the arid climate zone	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Cabbage-tree Wattle shrubland of the inland plains and drainage lines	3
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Cotton Bush - copperburr open shrubland of the arid climate zone	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Curly Mallee - bluebush open woodland of the arid zone	7
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Derived mixed shrubland on loamy-clay soils in the Cobar Peneplain Bioregion	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Desert Paper-bark shrubland of semi-arid and arid climate zone watercourses.	20
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Dillon Bush (Nitre Bush) shrubland/grassland of the semi-arid and arid zones	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Ephemeral forblands on playas and scalds in the Darling Riverine Plain Bioregion	100
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Gidgee chenopod woodland of the semi-arid (hot) climate zone, brown-red clays mainly Mulga Lands Bioregion.	12
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Gidgee of the intermittent watercourses or the arid zone (mainly Channel Country and SSD Bioreions)	19
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Heather Bush - Umbrella Mulga open shrubland of the semi-arid zone	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Hooked Needlewood - Needlewood - Mulga - Turpentine Bush open shrubland of the semi-arid and arid plains	33
Western	Arid and Semi-arid	_2L	Horse Mulga - Umbrella Mulga shrubland on ranges in the arid and	25

	Shrublands (CMA 2)		semi-arid climate zones	
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Leopardwood woodland of alluvial plains	43
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Low Bluebush - Bladder Saltbush open shrubland of the arid zone	25
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Lunette chenopod shrubland mainly of the Murray-Darling Depression Bioregion	27
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Mulga - Dead Finish on stony hills mainly of the Channel Country and Broken Hill Complex Bioregions	20
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Mulga - Ironwood shrubland on loams and clays mainly of the Cobar Peneplain Bioregion	33
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Mulga - Rock Fushia-bush sparse shrubland of silcrete scarps and mesas of the Channel Country Bioregion	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Mulga on stony rises in the arid and semi-arid climate zones, particuarly the Mulga Lands Bioregion	25
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Murray's Wattle sparse shrubland/forbland on sand rises of the Darling Riverine Plain Bioregion	50
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Narrow-leaved Hopbush-Scrub Turpentine-Senna shrubland of semi-arid and arid sandplains and dunes.	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Nelia tall open shrubland of semi-arid sandplains	60
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Old Man Saltbush shrubland of the semi-arid hot (pesistently dry) and arid climate zones (north-western NSW)	88
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Pearl Bluebush low open shrubland of the arid and semi-arid plains	38
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Prickly Wattle open shrubland of drainage lines on stony rises and plains of the arid climate zone	20
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Prickly Wattle tall open shrubland of dunes and sandplains of semi-arid regions	50
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Purple Wood wattle shrubland of the arid zone sandplains	50
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Sandhill Cane Grass hummock grassland on siliceous sands on dune crests of the arid zone	25
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Sandhill Wattle tall open shrubland on sand ridges in the arid zone	17
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Sandplain Mulga tall open shrubland of the semi-arid and arid climate zones	40
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Senna - Mulga - Needlewood open shrubland on loam-clay soils in swales and on the edges of claypans in the arid zone	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Shrubby Twinleaf - saltbush open shrubland on silcrete scarps of the arid zone	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Umbrella Mulga - Beefwood open shrubland on Peery Hills, Mulga Lands Bioregion	0
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	White Cypress Pine - Mulga low open woodland on the stony ranges of the arid zone (far north western NSW).	33
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	White Cypress Pine - Mulga shrubland on plains and sandplains in the arid and semi-arid (hot summer) climate zones.	60
Western	Arid and Semi-arid Shrublands (CMA 2)	_2L	Woollybutt open grasslands on red earths of the inland plains	0
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Disturbed annual saltbush forbland on clay plains and inundation zones of the arid and semi-arid climate zones	0
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Ephemeral forbland of low-saline lake-beds of the arid and semi-arid (warm) climate zones, mainly Murray-Darling Depression Bioregion	50
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Neverfail Grass - ephemeral herbaceous forbland of interdune claypans mainly in the arid climate zone	17
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Samphire - Small Hogweed saline forbland of lake margins in the arid and semi-arid (hot) zones	14
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Sparse saltbush forbland of the irregularly inundated lakes of the semi arid (persistently hot) and arid climate zones	22
Western	Estuarine and Saline Wetlands (CMA 2)	_2K	Sturts Pigface sparse forbland of saline soils of the arid zone	0
Western	Freshwater Wetlands (CMA 2)	_2J	Artesian Mound Spring forbland/sedgeland/grassland mainly of the Mulga Lands Bioregion	70
Western	Freshwater Wetlands (CMA 2)	_2J	Bladder Saltbush low open chenopod shrubland of the Strzelecki dunefields of the arid climate zone	20
Western	Freshwater Wetlands (CMA 2)	_2J	Canegrass swamp of drainage depressions, playa lakes and pans of the inland plains	10
Western	Freshwater Wetlands (CMA 2)	_2J	Cyperus - Typha sedgeland of the arid zone climate zone	0
Western	Freshwater Wetlands (CMA 2)	_2J	Eurah shrubland of inland floodplains	60
Western	Freshwater Wetlands	_2J	Golden Goosefoot shrubland swamps of the arid and semi-arid	10

	(CMA 2)		(hot summer) zones	
Western	Freshwater Wetlands (CMA 2)	_2J	Lignum shrubland on floodplains and depressions of the Mulga Lands, Channel Country Bioregions (arid and semi - arid (hot) climate zones)	18
Western	Freshwater Wetlands (CMA 2)	_2J	Nitre Goosefoot shrubland on clays of the inland floodplains	0
Western	Freshwater Wetlands (CMA 2)	_2J	Semi-permanent open freshwater wetlands of the inland slopes and plains	40
Western	Freshwater Wetlands (CMA 2)	_2J	Shallow freshwater mixed marsh sedgeland of northern-western NSW floodplains	56
Western	Freshwater Wetlands (CMA 2)	_2J	Swamp Paper-bark shrubland on edges of depressions in the Mulga Lands Bioregion	0
Western	Grasslands (CMA 2)	_2I	Bottlewasher - copperburr grassland of the arid zone.	0
Western	Grasslands (CMA 2)	_2I	Derived corkscrew grass grassland/forbland on sandplains and plains in the semi-arid (warm) climate zone	0
Western	Grasslands (CMA 2)	_2I	Kerosene Grass - Mulka grass - short grassland/forbland of the arid zone	0
Western	Grasslands (CMA 2)	_2I	Mitchell Grass - saltbush grassland/shrubland of the gibber downs of the arid climate zone	24
Western	Grasslands (CMA 2)	_2I	Mitchell Grass grassland of the semi-arid (hot) and arid zone alluvial floodplains	50
Western	Grasslands (CMA 2)	_2I	Queensland Bluegrass - Cup Grass - Mitchell Grass - Native Millet alluvial plains grassland on the eastern Darling Riverine Plains Bioregion	71
Western	Grasslands (CMA 2)	_2I	Windmill Grass - love grass - daisy derived grassland/forbland of arid climate zone	0
Western	Sclerophyll Grassy Woodlands (CMA 2)	_2D	Inland Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion	73
Western	Sclerophyll Grassy Woodlands (CMA 2)	_2D	Weeping Myall open woodland of the Darling Riverine Plains and Brigalow Belt South Bioregions	86
Western	Semi-arid Woodlands (CMA 2)	_2F	Belah woodland on alluvial plains in central-north NSW	85
Western	Semi-arid Woodlands (CMA 2)	_2F	Belah/Black Oak - Western Rosewood - Leopardwood low open woodland on sandplain and sandy flats in semi arid (hot) and arid climate zones	29
Western	Semi-arid Woodlands (CMA 2)	_2F	Black Box low woodland of ephemeral watercourses, fringing salt lakes and clay pans of semi-arid (hot) and arid zones	20
Western	Semi-arid Woodlands (CMA 2)	_2F	Black Box woodland on the floodplains mainly of the Darling Riverine Plains Bioregion.	60
Western	Semi-arid Woodlands (CMA 2)	_2F	Black Oak - Western Rosewood open woodland on deep sandy loams of Murray-Darling Depression and Riverina Bioregions	44
Western	Semi-arid Woodlands (CMA 2)	_2F	Brigalow - Belah woodland on alluvial often gilgaied clay soil mainly in the Brigalow Belt South Bioregion .	91
Western	Semi-arid Woodlands (CMA 2)	_2F	Brigalow open woodland on red earth and clay plains mainly in the Mulga Lands Bioregion	33
Western	Semi-arid Woodlands (CMA 2)	_2F	Brigalow-Gidgee open woodland on clay plains west of the Culgoa River, Mulga Lands Bioregion	46
Western	Semi-arid Woodlands (CMA 2)	_2F	Buck Spinifex hummock grassland - Silver-leaved Ironbark open woodland on deep sand	3
Western	Semi-arid Woodlands (CMA 2)	_2F	Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones	30
Western	Semi-arid Woodlands (CMA 2)	_2F	Coolabah - River Coobah - Lignum woodland of frequently flooded channels mainly of the Darling Riverine Plains Bioregion	70
Western	Semi-arid Woodlands (CMA 2)	_2F	Coolabah open woodland dunefield depressions of the arid zone	7
Western	Semi-arid Woodlands (CMA 2)	_2F	Coolabah open woodland with chenopod/grassy ground cover on grey clays on higher floodplains	71
Western	Semi-arid Woodlands (CMA 2)	_2F	Coolabah woodland of intermittent watercourses in arid zone, mainly in the Channel Country Bioregion	17
Western	Semi-arid Woodlands (CMA 2)	_2F	Desert Bloodwood - Mulga low woodland of the semi-arid plains	17
Western	Semi-arid Woodlands (CMA 2)	_2F	Dwyer's Red Gum - Currawang grassy mid-high woodland of central NSW	33
Western	Semi-arid Woodlands (CMA 2)	_2F	Dwyers Red Gum - Currawang low woodland mainly of the Cobar Peneplain Bioregion	25
Western	Semi-arid Woodlands (CMA 2)	_2F	Green Mallee - White Cypress Pine woodland on gravelly rises of central NSW	20
Western	Semi-arid Woodlands (CMA 2)	_2F	Grey Mallee - Mulga shrubland of the north-western Cobar Peneplain Bioregion	6
Western	Semi-arid Woodlands (CMA 2)	_2F	Grey Mallee - White Cypress Pine woodland on rocky hills of the eastern Cobar Peneplain Bioregion	6
Western	Semi-arid Woodlands (CMA 2)	_2F	Ironwood woodland of the semi-arid plains	20

Western	Semi-arid Woodlands (CMA 2)	_2F	Linear Dune Mallee mainly of the Murray-Darling Basin Bioregion	14
Western	Semi-arid Woodlands (CMA 2)	_2F	Mallee - Smooth-barked Coolabah woodland on red earth flats of the eastern Cobar Peneplain Bioregion	56
Western	Semi-arid Woodlands (CMA 2)	_2F	Pine - Belah low open woodland of the western Cobar Peneplain and northern Murray-Darling Depression Bioregions	10
Western	Semi-arid Woodlands (CMA 2)	_2F	Pine shrubland of the western Cobar Peneplain Bioregion	4
Western	Semi-arid Woodlands (CMA 2)	_2F	Poplar Box - Coolabah floodplain woodland on light clay soil mainly in the Darling Riverine Plain Bioregion	60
Western	Semi-arid Woodlands (CMA 2)	_2F	Poplar Box - Gum-barked Coolabah - White Cypress Pine shrubby woodland mainly in the Cobar Peneplain Bioregion	33
Western	Semi-arid Woodlands (CMA 2)	_2F	Poplar Box grassy low woodland of drainage lines and depressions of the semi-arid (hot) and arid zone climate zones	15
Western	Semi-arid Woodlands (CMA 2)	_2F	Poplar Box grassy woodland on flats mainly in the Cobar Peneplain and Murray-Darling Depression Bioregions	44
Western	Semi-arid Woodlands (CMA 2)	_2F	Poplar Box-Mulga-Ironwood woodland on red loam soils on plains in the Cobar Peneplain and eastern Mulga Lands Bioregions	23
Western	Semi-arid Woodlands (CMA 2)	_2F	Ridge mallee woodland on hills of meta-sediments and volcanics, eastern Cobar Peneplain Bioregion	25
Western	Semi-arid Woodlands (CMA 2)	_2F	River Red Gum open woodland of intermittent watercourses mainly of the arid climate zone	12
Western	Semi-arid Woodlands (CMA 2)	_2F	River Red Gum woodland of lake fringes in the semi-arid (hot) and arid climate zones	9
Western	Semi-arid Woodlands (CMA 2)	_2F	Silver-leaved Ironbark - Poplar Box woodland mainly on gravelly ridges of the north-western plains of NSW	53
Western	Semi-arid Woodlands (CMA 2)	_2F	Smooth-barked Coolabah woodland of Peery Hills sandslope, Mulga Lands Bioregion	7
Western	Semi-arid Woodlands (CMA 2)	_2F	Smooth-barked Coolabah woodland on sedimentary substrates mainly in the Cobar Peneplain Bioregion	19
Western	Semi-arid Woodlands (CMA 2)	_2F	Smooth-barked Coolibah - Mulga open woodland on gravelly ridges of the Cobar Peneplain Bioregion	12
Western	Semi-arid Woodlands (CMA 2)	_2F	Western Bloodwood - Whitewood low open woodland on Tibooburra Granite	13
Western	Semi-arid Woodlands (CMA 2)	_2F	White Cypress Pine - Mulga low woodland on siliceous rocky ranges mainly of the Cobar Peneplain	19
Western	Semi-arid Woodlands (CMA 2)	_2F	White Cypress Pine - Poplar Box woodland on footslopes and peneplains mainly in the Cobar Peneplain Bioregion	44
Western	Semi-arid Woodlands (CMA 2)	_2F	Whitewood - Western Rosewood low woodland on sandplains and dunes of the semi-arid (hot) and arid climatic zones	38
Western	Semi-arid Woodlands (CMA 2)	_2F	Yapunyah woodland of Cuttaburra-Paroo River system, Mulga Lands Bioregion	10
Western	Semi-arid Woodlands (CMA 2)	_2F	Yarran shrubland of the sandplains and plains of the semi-arid (warm) and arid climate zone plains	58
Western	Swamp Sclerophyll Forests (CMA 2)	_2C	River Red Gum - Poplar Box grassy woodland on Quaternary alluvial sandy-loam soils of the Cobar Peneplain	10
Western	Swamp Sclerophyll Forests (CMA 2)	_2C	River Red Gum low woodland of rocky gorges and creeks in the Cobar Peneplain	10
Western	Swamp Sclerophyll Forests (CMA 2)	_2C	River Red Gum open forest and woodland mainly of the Darling Riverine Plains Bioregion	50
Western	Swamp Sclerophyll Forests (CMA 2)	_2C	River Red Gum woodland of rocky creeks in the ranges of the arid climate zone	10

Appendix E Sub-regions of NSW Catchment Management Authority Areas



Sub-regions of NSW Catchment Management Authority Areas

Key to map

Border Rivers/Gwydir

1 Beardy River Hills
2 Binghi Plateau
3 Bundarra Downs
4 Castlereagh-Barwon
5 Deepwater Downs
6 Eastern Nandewars
7 Glenn Innes-Guyra Basalts
8 Inverell Basalts
9 Kaputar
10 Moredun Volcanics
11 Nandewar, Northern Complex
12 Northeast Forest Lands
13 Northern Basalts
14 Northern Outwash
15 Peel
16 Severn River Volcanics
17 Tenterfield Plateau
18 Tingha Plateau
19 Yarrowyck-Kentucky Downs

Central West

1 Bathurst

2 Bogan-Macquarie
3 Canbelego Downs
4 Capertee
5 Castlereagh-Barwon
6 Hill End
7 Kerrabee
8 Liverpool Range
9 Lower Slopes
10 Nymagee-Rankins Springs
11 Oberon
12 Orange
13 Pilliga
14 Pilliga Outwash
15 Talbragar Valley
16 Upper Slopes
17 Wollemi

Hawkesbury/Nepean

1 Bathurst
2 Bungonia
3 Burragorang
4 Capertee
5 Crookwell
6 Cumberland
7 Kanangra
8 Monaro
9 Moss Vale
10 Oberon
11 Pittwater
12 Sydney Cataract
13 Wollemi
14 Yengo

Hunter/Central Rivers

1 Barrington
2 Comboyne Plateau
3 Ellerston
4 Hunter
5 Karuah Manning
6 Kerrabee
7 Liverpool Range
8 Macleay Hastings
9 Mummel Escarpment
10 Pilliga
11 Tomalla
12 Upper Hunter
13 Walcha Plateau
14 Wollemi
15 Wyong
16 Yengo

Lachlan

1 Barnato Downs
2 Crookwell
3 Darling Depression

4 Kanangra
5 Lachlan
6 Lachlan Plains
7 Lower Slopes
8 Murrumbateman
9 Nymagee-Rankins Springs
10 Oberon
11 Orange
12 South Olary Plain, Murray Basin Sands
13 Upper Slopes

Lower Murray/Darling
1 Barrier Range
2 Barrier Range Outwash, Fans and Plains
3 Darling Depression
4 Great Darling Anabranch
5 Lachlan
6 Menindee
7 Murray Scroll Belt
9 Pooncarie-Darling
10 Robinvale Plains
11 South Olary Plain, Murray Basin Sands

Murra
y
1 Bondo
2 Lower Slopes
3 Murray Fans
4 Murrumbidgee
5 New South Wales Alps
6 South Olary Plain, Murray Basin Sands
7 Upper Slopes

Murrumbidgee
1 Bondo
2 Darling Depression
3 Kybeyan - Gourock
4 Lachlan
5 Lachlan Plains
6 Lower Slopes
7 Monaro
8 Murrumbateman
9 Murrumbidgee
10 New South Wales Alps
11 South Olary Plain, Murray Basin Sands
12 Upper Slopes

Namoi
1 Castlereagh-Barwon
2 Eastern Nandewars
3 Kaputar
4 Liverpool Plains
5 Liverpool Range
6 Northern Basalts
7 Peel

8 Pilliga
9 Pilliga Outwash
10 Walcha Plateau

Northern Rivers

1 Armidale Plateau
2 Carrai Plateau
3 Cataract
4 Chaelundi
5 Clarence Lowlands
6 Clarence Sandstones
7 Coffs Coast & Escarpment
8 Comboyne Plateau
9 Dalmorton
10 Ebor Basalts
11 Glenn Innes-Guyra Basalts
12 Guy Fawkes
13 Macleay Gorges
14 Macleay Hastings
15 Murwillumbah (Qld - Southeast Hills and Ranges)
16 Nightcap
17 Northeast Forest Lands
18 Richmond - Tweed (Qld - Scenic Rim)
19 Rocky River Gorge
20 Round Mountain
21 Stanthorpe Plateau
22 Upper Manning
23 Walcha Plateau
24 Washpool
25 Wongwibinda Plateau
26 Woodenbong
27 Yuraygir

Southern Rivers

1 Bateman
2 Bungonia
3 Burragorang
4 East Gippsland Lowlands (EGL)
5 Ettrema
6 Illawarra
7 Jervis
8 Kybeyan - Gourock
9 Monaro
10 Moss Vale
11 New South Wales Alps
12 South East Coastal Ranges
13 South East Coastal Plains

Western

1 Barnato Downs
2 Barrier Range
3 Barrier Range Outwash, Fans and Plains
4 Bogan-Macquarie
5 Boorindal Plains
6 Bulloo Dunefields

7 Bulloo Overflow
8 Canbelego Downs
9 Castlereagh-Barwon
10 Central Depression
11 Central Downs - Fringing Tablelands and Downs
12 Core Ranges
13 Core Ranges
14 Culgoa-Bokhara
15 Darling Depression
16 Kerribree Basin
17 Louth Plains
18 Menindee
19 Moonie - Barwon Interfluve, Collarenebri Interfluve
20 Mootwingee Downs
21 Narrandool
22 Nebine Plains, Block Range
23 Nymagee-Rankins Springs
24 Paroo Overflow
25 Paroo Sand Sheets, Cuttaburra-Paroo
26 Paroo-Darling Sands
27 Scopes Range
28 South Olary Plain, Murray Basin Sands
29 Strzelecki Desert, Western Dunefields
30 Urisino Sandplains
31 Warrambool-Moonie
32 Warrego Plains
33 Warrego Sands
34 West Warrego - Tablelands and Downs
35 White Cliffs Plateau
36 Wilcannia Plains

Appendix F Management Actions Specified by the Clearing Module of the LSC Tool for Assessed Land Degradation Hazards to Pass the Improve or Maintain Test.

Hazard	Class	Management Action
Salinity	3	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	4	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	5	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	6	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Water Erosion	3	Use conservation farming practices &/or erosion control earthworks
Water Erosion	3	If cropping: no burning of stubble, use controlled traffic, minimal cultivation, adequate fertiliser, direct seeding
Water Erosion	3	If cropping very long slopes: use strip cropping
Water Erosion	3	If grazing: use suitable pasture rotations & manage grazing to maintain groundcover and pasture composition
Water Erosion	3	If cropping or grazing: use soil ameliorants where required (gypsum, lime)
Water Erosion	4	If cropping: use conservation farming practices
Water Erosion	4	If cropping: no burning of stubble, use controlled traffic, minimal cultivation, adequate fertiliser, direct seeding
Water Erosion	4	If grazing: use suitable pasture rotations & adequate fertiliser & manage grazing to maintain groundcover and pasture composition
Water Erosion	4	If cropping or grazing: use soil ameliorants where required (gypsum, lime)
Water Erosion	5	No cultivation or cropping
Water Erosion	5	If grazing: use suitable pasture rotations & adequate fertiliser & manage grazing to maintain groundcover and pasture composition
Water Erosion	5	Use earthworks to control erosion and intercept sediment
Water Erosion	6	No cultivation or cropping
Water Erosion	6	If grazing: use controlled grazing, suitable pasture rotations, adequate fertiliser & maintain groundcover
Wind Erosion	3	Use conservation farming practices
Wind Erosion	3	If cropping: no burning of stubble, maintain 50% groundcover, minimal cultivation with reduced speed of implements, adequate fertiliser, direct seeding
Wind Erosion	3	If grazing: use controlled grazing, minimal cultivation to establish pasture and suitable pasture rotations
Wind Erosion	3	If cropping or grazing: install wind breaks
Wind Erosion	4	Use conservation farming practices
Wind Erosion	4	If cropping: limited to 3 years in 10
Wind Erosion	4	If cropping: no burning of stubble, maintain 50% groundcover, minimal cultivation with reduced speed of implements, adequate fertiliser, direct seeding
Wind Erosion	4	If grazing: use controlled grazing, minimal cultivation to establish pasture and suitable pasture rotations
Wind Erosion	4	If cropping or grazing: install wind breaks
Wind Erosion	5	No cultivation or cropping
Wind Erosion	5	If grazing: manage pasture to maintain groundcover, including use of

		adequate fertiliser
Wind Erosion	6	No cultivation or cropping
Wind Erosion	6	If grazing: manage to maintain groundcover, including use of adequate fertiliser
Soil Structure Decline	3	Use conservation farming practices
Soil Structure Decline	3	If cropping: no stubble burning (retain and incorporate stubble), and use controlled traffic, minimal cultivation, direct seeding, adequate fertiliser, adequate soil ameliorant (lime), & recommended rotation and length of pasture phases
Soil Structure Decline	3	If grazing: use controlled grazing, manage pasture to maintain groundcover and biomass to protect soil structure, adequate soil ameliorant (lime)
Soil Structure Decline	4	Use conservation farming practices
Soil Structure Decline	4	If cropping: limited to 3 years in 10
Soil Structure Decline	4	If cropping: no stubble burning (maintain 50% groundcover), controlled traffic, reduced speed of cultivation, minimal cultivation, direct seeding, adequate fertiliser, adequate soil ameliorant (lime)
Soil Structure Decline	4	If grazing: use controlled grazing, suitable pasture rotations, manage pasture to maintain groundcover and biomass to protect soil structure, use adequate fertiliser & soil ameliorant (lime)
Soil Structure Decline	5	No cultivation or cropping
Soil Structure Decline	5	If grazing: manage pasture to maintain groundcover and biomass to protect soil structure, use adequate fertiliser & soil ameliorant (lime)
Soil Structure Decline	6	No cultivation or cropping
Soil Structure Decline	6	If grazing: manage pasture to maintain groundcover and biomass to protect soil structure, use adequate fertiliser & soil ameliorant (lime)
Rockiness & Shallow Soils	4	No cropping
Rockiness & Shallow Soils	4	If grazing: manage pasture to maintain ground cover, including use of adequate fertiliser
Rockiness & Shallow Soils	5	No cultivation or cropping
Rockiness & Shallow Soils	5	If grazing: manage pasture to maintain ground cover, including use of adequate fertiliser
Rockiness & Shallow Soils	6	No cultivation or cropping
Rockiness & Shallow Soils	6	If grazing: manage pasture to maintain ground cover, including use of adequate fertiliser
Acid Sulfate Soils	3	No soil disturbance or drainage deeper than 3 metres
Acid Sulfate Soils	4	No soil disturbance or drainage deeper than 1 metre
Acid Sulfate Soils	5	No soil disturbance or drainage deeper than 0.5 metre
Mass	3	No concentration of surface or subsurface water flow

Movement		
Mass Movement	3	No excavation batters >2.5 metres without geotechnical design & batter angles <3:1
Mass Movement	3	Maintain groundcover to maximise water use & bind soil
Mass Movement	6	No concentration of surface or subsurface water flow
Mass Movement	6	No excavation batters >1.5 metres without geotechnical design & batter angles <3:1
Mass Movement	6	Subsurface drainage required
Mass Movement	6	Maintain groundcover, especially deep-rooted plants, to maximise water use & bind soil

Appendix G Management Actions Specified by the Offsets Module of the LSC Tool for Assessed Land Degradation Hazards to Pass the Improve or Maintain Test.

Hazard	Class	Management Action
Water Erosion	4	If establishing perennial pastures, use only direct seeding with minimal soil disturbance
Water Erosion	4	If planting trees for native vegetation regeneration, all cultivation or deep ripping must follow the contour
Water Erosion	5	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Water Erosion	5	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Water Erosion	6	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Water Erosion	6	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Water Erosion	7	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Water Erosion	8	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Wind Erosion	4	If establishing perennial pastures, use only direct seeding with minimal soil disturbance
Wind Erosion	4	If planting trees for native vegetation regeneration, all cultivation or deep ripping must follow the contour
Wind Erosion	5	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Wind Erosion	5	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Wind Erosion	6	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Wind Erosion	6	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Wind Erosion	7	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Wind Erosion	8	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Soil Structure	4	If establishing perennial pastures, use only direct seeding with minimal soil disturbance
Soil Structure	4	If planting trees for native vegetation regeneration, all cultivation or deep ripping must follow the contour
Soil Structure	7	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Soil Structure	8	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding

Rockiness & Shallow Soils	4	If establishing perennial pastures, use only direct seeding with minimal soil disturbance
Rockiness & Shallow Soils	4	If planting trees for native vegetation regeneration, all cultivation or deep ripping must follow the contour
Rockiness & Shallow Soils	5	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Rockiness & Shallow Soils	5	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Rockiness & Shallow Soils	6	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Rockiness & Shallow Soils	6	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Rockiness & Shallow Soils	7	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Rockiness & Shallow Soils	8	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Acid Sulfate Soils	4	If establishing perennial pastures, use only direct seeding with minimal soil disturbance
Acid Sulfate Soils	4	If planting trees for native vegetation regeneration, all cultivation or deep ripping must follow the contour
Acid Sulfate Soils	5	If establishing perennial pastures, use only broadcast seeding without cultivation or soil disturbance
Acid Sulfate Soils	5	If planting individual trees or broadcast seeding for native vegetation regeneration, deep ripping or extensive soil disturbance should not be used
Acid Sulfate Soils	7	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Acid Sulfate Soils	8	Regeneration of native vegetation only to be undertaken by fencing and natural regeneration or broadcast seeding
Salinity	3	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	4	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	5	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	6	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	7	Run the Salinity Benefits Index Tool to ensure no net disbenefit
Salinity	8	Run the Salinity Benefits Index Tool to ensure no net disbenefit