

Travelling Stock Reserves

Vegetation Guide

Riverina Local Land Services



Local Land
Services

This project has been funded by NSW Environmental Trust



REGENERATION SOLUTIONS P/L

Riverina Local Land Services Travelling Stock Reserve Vegetation Guide

Prepared for NSW Local Land Services

Report for: Local Land Services

Prepared by: Ian Davidson, Regeneration Solutions Pty Ltd

Date: February 2020

Funded by: NSW Environmental Trust

This work draws heavily on material from the website of the Office of Environment and Heritage. The authors of this guide do not claim authorship, nor accept responsibility for, content drawn from this site.

All photos were taken by Ian Davidson unless stated otherwise.

Cover photo: Flax-lily flowering on Old Gunbar stock route



Contents

Vegetation in the Riverina region	1
Vegetation classes of the Riverina Local Land Services region	2
Southern Tableland Wet Sclerophyll Forests	3
Upper Riverina Dry Sclerophyll Forests	4
Western Slopes Dry Sclerophyll Forests	5
Western Slopes Grassy Woodlands	6
Floodplain Transition Woodlands	7
Riverine Sandhill Woodlands	8
Inland Riverine Forests	9
Inland Floodplain Woodlands	10
Inland Floodplain Shrublands	11
Inland Rocky Hill Woodlands	12
Riverine Plain Woodlands	13
Riverine Plain Grasslands	14
Riverine Chenopod Shrublands	15
Sand Plain Mallee Woodlands	16
Semi-arid Sand Plain Woodlands	17
NSW and EPBC (Commonwealth) Endangered Ecological Communities (EECs) of the Riverina region	18
NSW Endangered Ecological Communities	19
Commonwealth EPBC EECs	20
Site managed species	21
Recommended plant identification references	21

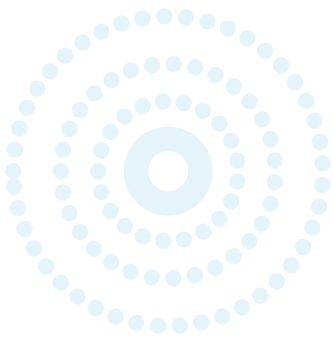
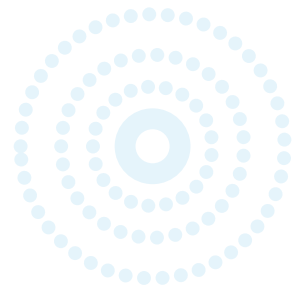
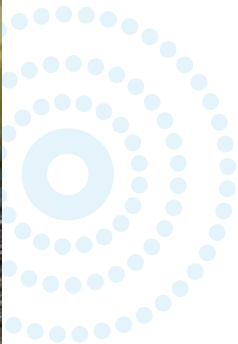






Table of figures

Figure 1: Riverina Local Land Services region	1
Figure 2: Keith Class - Southern Tableland Wet Sclerophyll Forests	3
Figure 3: Keith Class - Upper Riverina Dry Sclerophyll Forests	4
Figure 4: Keith Class -Western Slopes Dry Sclerophyll Forests	5
Figure 5: Keith Class - Western Slopes Grassy Woodlands	6
Figure 6: Keith Class - Floodplain Transition Woodlands	7
Figure 7: Keith Class - Riverine Sandhill Woodlands	8
Figure 8: Keith Class - Inland Riverine Forests	9
Figure 9: Keith Class - Inland Floodplain Woodlands	10
Figure 10: Keith Class - Inland Floodplain Shrublands	11
Figure 11: Keith Class - Inland Rocky Hill Woodlands	12
Figure 12: Keith Class - Riverine Plain Woodlands	13
Figure 13: Keith Class - Riverine Plain Grasslands	14
Figure 14: Keith Class - Riverine Chenopod Shrublands	15
Figure 15: Keith Class - Sand Plain Mallee Woodlands	16
Figure 16: Keith Class - Semi-arid Sand Plain Woodlands	17



Vegetation in the Riverina region

The Riverina region covers around 67,000 square kilometres (6.7 million hectares) across a range of environments, from the steep alpine slopes of the Great Dividing Range (GDR) in the east near Tumut, to the rocky ranges in central parts and the vast native grasslands and shrublands in the west bordered by the Lower Lachlan River. The region is traversed by the Murrumbidgee River floodplain and associated creeklines across a landscape mostly cleared for agriculture; but with significant remnant native vegetation.

This document provides basic advice and descriptions of the vegetation formations, endangered ecological communities (both NSW and Commonwealth) and site managed species known to occur in the Riverina Local Land Services region. This information is especially relevant to Local Land Services staff managing Travelling Stock Reserves (TSRs) but is also suitable for other Local Land Services staff and land managers as a way to rapidly assess the potential status of native vegetation in the field.

Links are provided to enable a more thorough understanding of the matters described.

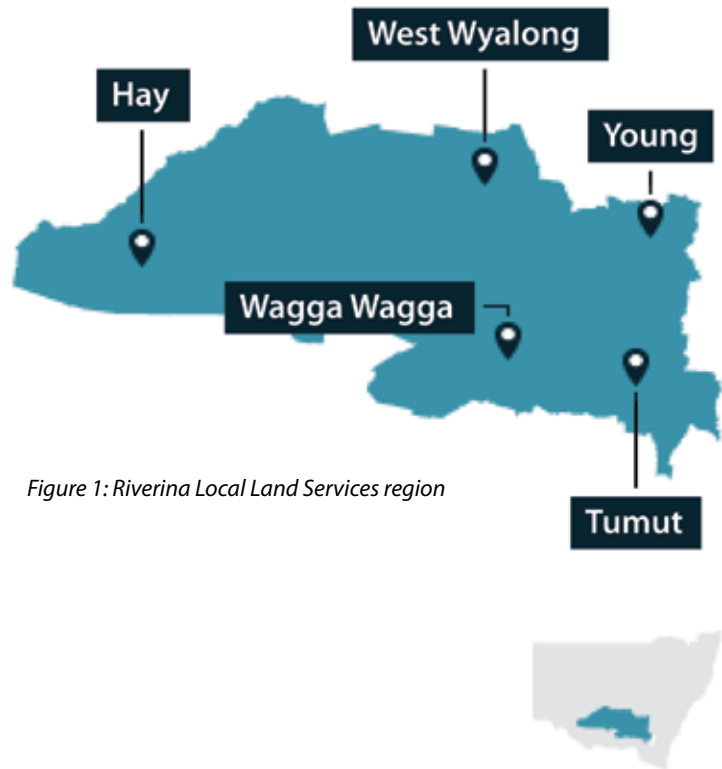


Figure 1: Riverina Local Land Services region



Vegetation classes of the Riverina Local Land Services region

There are 15 Vegetation Classes that occur in the region, excluding the alpine areas which largely fall within the Kosciusko National Park.

- Southern Tableland Wet Sclerophyll Forests
- Upper Riverina Dry Sclerophyll Forests
- Western Slopes Dry Sclerophyll Forests
- Western Slopes Grassy Woodlands
- Floodplain Transition Woodlands
- Riverine Sandhill Woodlands
- Inland Riverine Forests
- Inland Floodplain Woodlands
- Inland Floodplain Shrublands
- Inland Rocky Hill Woodlands
- Riverine Plain Woodlands
- Riverine Plain Grasslands
- Riverine Chenopod Shrublands
- Sand Plain Mallee Woodlands
- Semi-arid Sand Plain Woodlands

The following is a brief summary of key vegetation community information for rapid field identification and assessment, including the presence of any Endangered Ecological Communities (EECs). More detailed information including distribution, vegetation structure and floristics is available by entering the vegetation class name into your browser and clicking on the first Office of Environment and Heritage (OEH) site.

Southern Tableland Wet Sclerophyll Forests

Distribution

Higher slopes above 600-1000+m in the east around Tumut. Note that this vegetation type was often cleared for pine plantations.

Vegetation structure

Tall open eucalypt forest 20-35 m tall, with variable density of shrubs, and a diverse, relatively continuous herbaceous-grassy groundcover.

Main species

The overstorey is dominated by a range of higher rainfall mountain eucalypts e.g. blue gum, apple box, mountain gum, peppermints and ribbon gum. The shrub layer is usually well developed with a range of tall wattles and dense lower layers of *Cassinia* spps. and heaths often common. The understorey usually consists of some grasses and many forbs*.

* herbaceous flowering plant.

EEC presence

Montane Peatlands and Swamps; and Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland may occur in this vegetation community along swampy drainage lines and frost hollows.

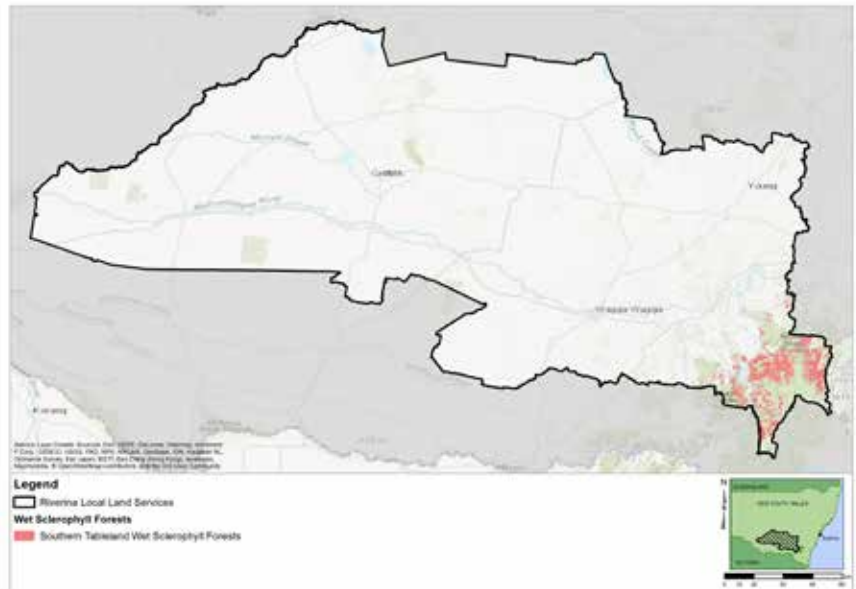


Figure 2: Keith Class - Southern Tableland Wet Sclerophyll Forests



Southern Tableland Wet Sclerophyll Forest in Bago State Forest

Upper Riverina Dry Sclerophyll Forests

Distribution

Western fall of the Great Dividing Range between 300-700m above sea level, mainly the area between Burrinjuck and Albury.

Vegetation structure

Open eucalypt forest or woodland up to 20 m tall with a mix of shrubs and grasses.

Main species

The overstorey is dominated by various box species, Blakely's red gum and red stringybark. The shrub layer can be more or less common and usually includes wattle and heaths. The understorey usually consists of grasses and forbs.

EEC presence

Box-Gum Woodlands may occur on lower fertile site where white box, yellow box and or Blakely's red gum are present with a grassy ground layer dominated by kangaroo grass.

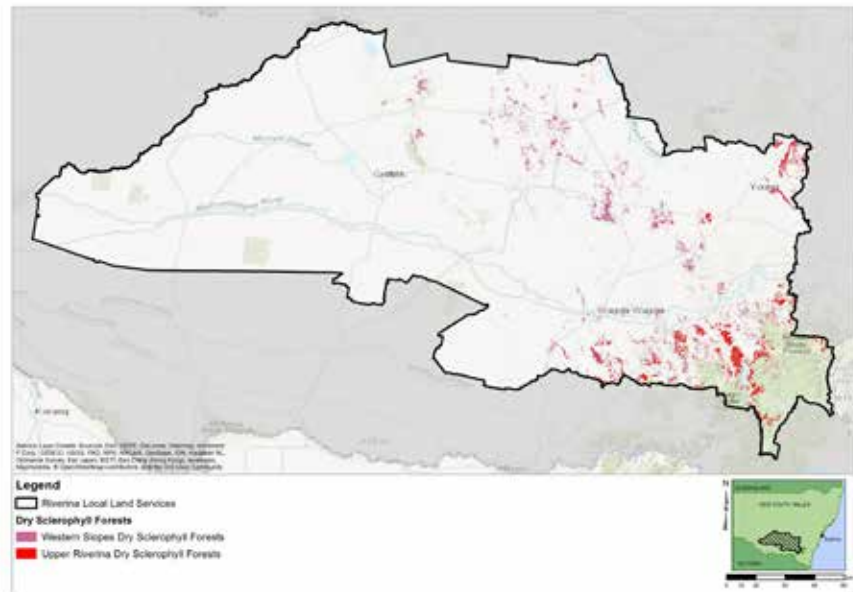


Figure 3: Keith Class - Upper Riverina Dry Sclerophyll Forests



Upper Riverina Dry Sclerophyll Forest with grassy understorey near Lankeys Creek

Western Slopes Dry Sclerophyll Forests

Distribution

Occurs on ridges and slopes below 600 m elevation on sandstone and granite outcrops with low fertility sandy loams from the Griffith district to around Tumut.

Vegetation structure

Open eucalypt forest or woodland 10-25 m tall, dominated by mugga ironbark and cypress pines with an open shrub layer and sparse to moderate grassy ground cover.

Main species

The overstorey is dominated by mugga ironbark and tumbledown red gum. Black and white cypress pine may be locally common. The shrub layer is often diverse with wattles, bush-peas and heaths often present and the understorey consists of spear and wallaby grasses and many forbs.

EEC presence

The critically endangered EEC Mallee and Mallee-Broombush dominated woodland and shrubland, lacking *Triodia* is found mostly in this vegetation community.

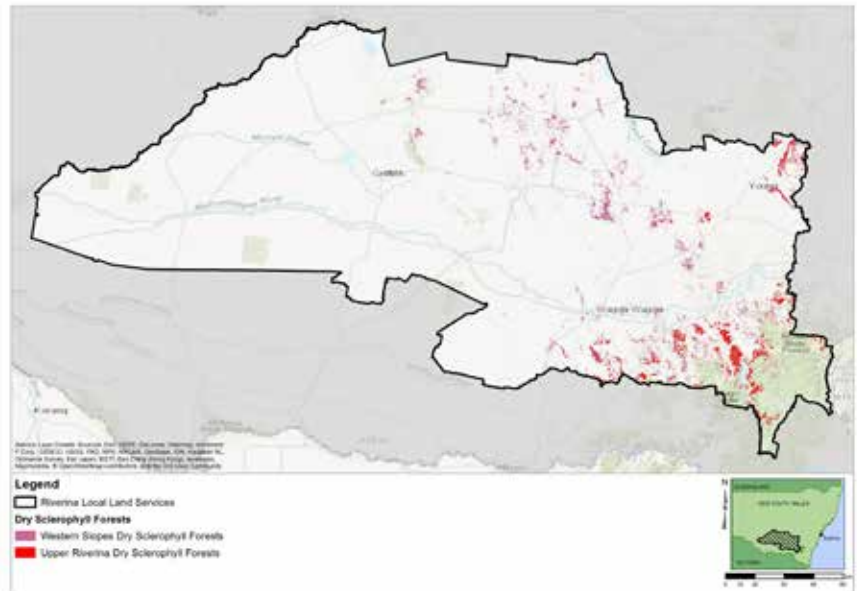


Figure 4: Keith Class -Western Slopes Dry Sclerophyll Forests



Western Slopes Dry Sclerophyll Forest in Livingstone NP, note the aspect difference of herb-rich green understorey on the sheltered slope compared with the dry sparse understorey on the more exposed slope

Western Slopes Grassy Woodlands

Distribution

Occurs on the more fertile lower slopes and rises between Ardlethan, Young and Tumut.

Vegetation structure

Open eucalypt forest or woodland up to 20 m tall with a mix of shrubs and grasses.

Main species

The overstorey is dominated by various box species, Blakely's red gum and red stringybark. The shrub layer can be more or less common and usually includes wattle and heaths. The understorey usually consists of grasses and forbs.

EEC presence

Box-Gum Woodlands are commonly found in this vegetation community.

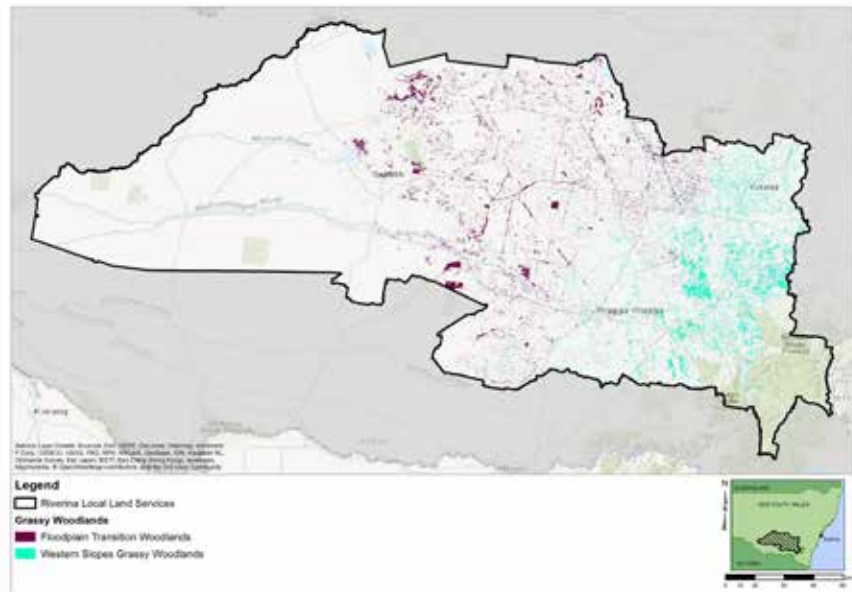


Figure 5: Keith Class - Western Slopes Grassy Woodlands



Western Slopes Grassy Woodland on the rolling slopes north of Woomargama NP

Floodplain Transition Woodlands

Distribution

Transitional zone where the western slopes merge into the floodplains of the Murrumbidgee River system mostly east of the Kidman Way.

Vegetation structure

Open woodland 15-25 m tall and dominated by box eucalypts, scattered shrubs including wattles and saltbush and a largely continuous grassy ground cover.

Main species

The overstorey is dominated by grey box and occasionally yellow box, buloke and white cypress pine. The shrub layer may contain many wattles, hopbush, butterbush and the understorey may consist of wallaby, spear or windmill grasses, numerous saltbushes and forbs.

EEC presence

Inland Grey Box Woodland and *Allocasuarina luehmannii* Woodland are mostly found in this vegetation community.

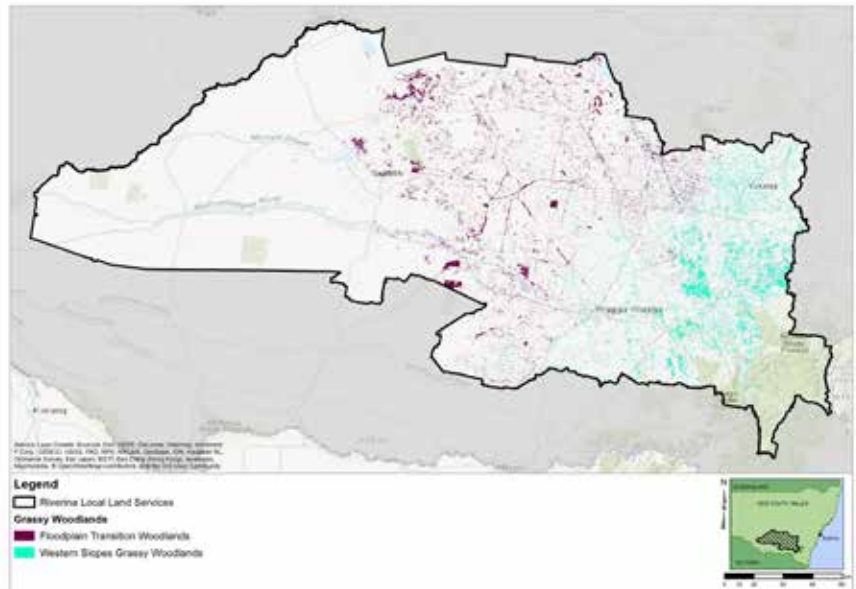


Figure 6: Keith Class - Floodplain Transition Woodlands



Floodplain Transition Woodland on TSR near Morundah

Riverine Sandhill Woodlands

Distribution

Found scattered across the Riverina riverine plain on rises above floodplains and banks of prior streams, mostly west of the Olympic Way.

Vegetation structure

Open woodland dominated by cypress pines with scattered eucalypts, an open shrub layer and patchy grass and forb ground layer.

Main species

The overstorey is dominated by white cypress pine with scattered grey box, yellow box and buloke. The shrub layer may contain many wattles, hakeas, hopbush and butterbush. The often-sparse understorey may consist of wire or spear grasses and forbs including burr daisy and sida.

EEC presence

Three EECs are found in this vegetation community, including commonly Sandhill Pine Woodland, occasionally *Allocasuarina luehmannii* Woodland where buloke is dominant and *Acacia melvillei* Shrubland near Balranald.

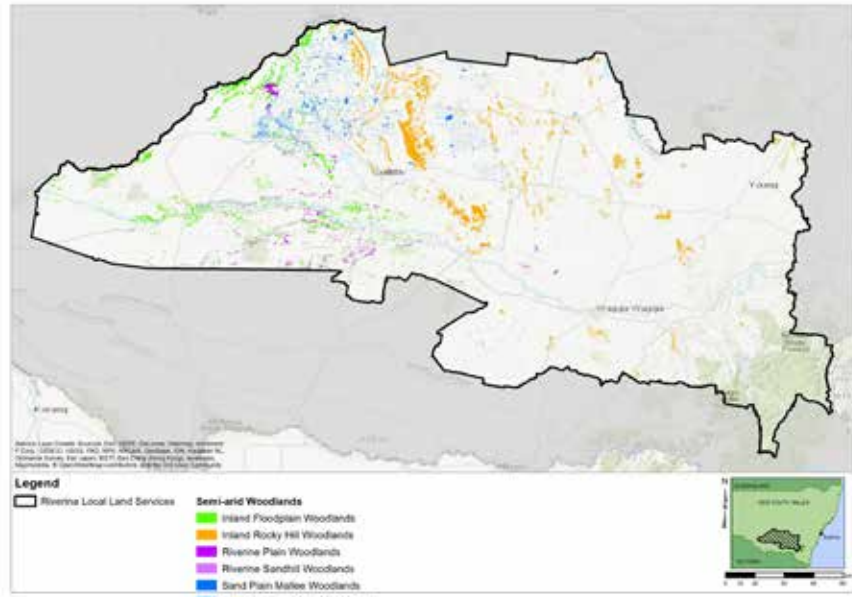


Figure 7: Keith Class - Riverine Sandhill Woodlands



Riverine Sandhill Woodland on TSR near Gunbar

Inland Riverine Forests

Distribution

Fertile deposits subject to frequent flooding on the sandy banks of major inland rivers and the beds of intermittent streams, billabongs and channelled floodplains of the Murrumbidgee River.

Vegetation structure

Open eucalypt forest up to 40 m tall with a dense to patchy, semi-aquatic ground cover interspersed with bare ground and scattered shrubs.

Main species

The overstorey is dominated by river red gum and mixed occasionally with black box in the drier parts and yellow box or grey box in the central areas e.g. between Narrandera and Carrathool. Where the shrub layer exists, it contains silver wattle and river bottlebrush in the upper reaches and cooba, river cooba and dwarf cherry west of Narrandera. The often-sparse understorey may consist of sedges, rushes and reeds and aquatic forbs and grasses.

EEC presence

There are no EECs listed for this vegetation community.

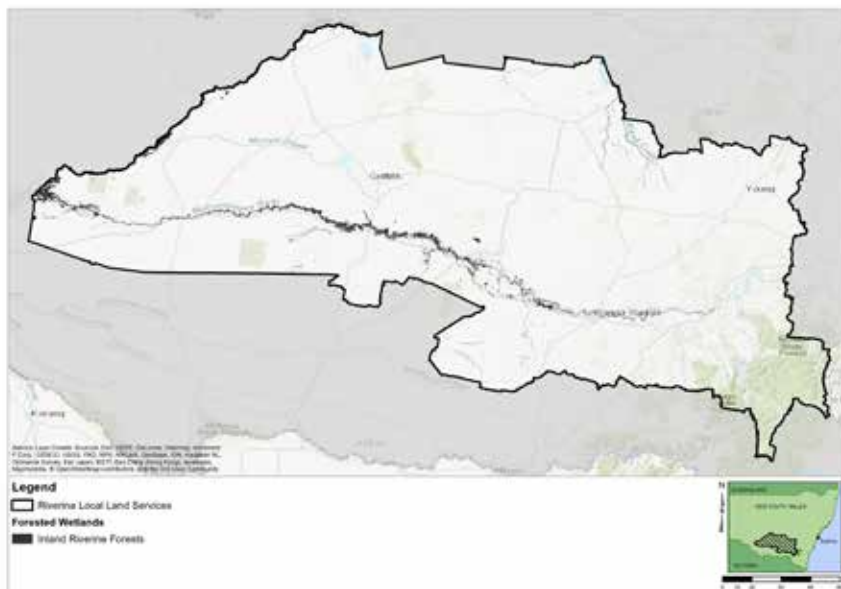


Figure 8: Keith Class - Inland Riverine Forests



Inland Riverine Forest on the Niemur River TSR, note the abundant Warrego summer grass following recent flooding

Inland Floodplain Woodlands

Distribution

Widespread on the floodplains of the mid and lower Murrumbidgee River, west of Narrandera, with heavy alluvial clays and less frequently flooded than the river red gum forests.

Vegetation structure

Black box woodland up to 25 m tall, with a variable shrub layer of saltbushes and semi-continuous herbaceous ground cover.

Main species

The overstorey is black box and the shrub layer where present is dominated by saltbushes e.g. nitre goosefoot and lignum. The often-sparse understorey may vary from grassy e.g. curly windmill grass to mainly forbs and sedges.

EEC presence

There are no EECs listed for this vegetation community.

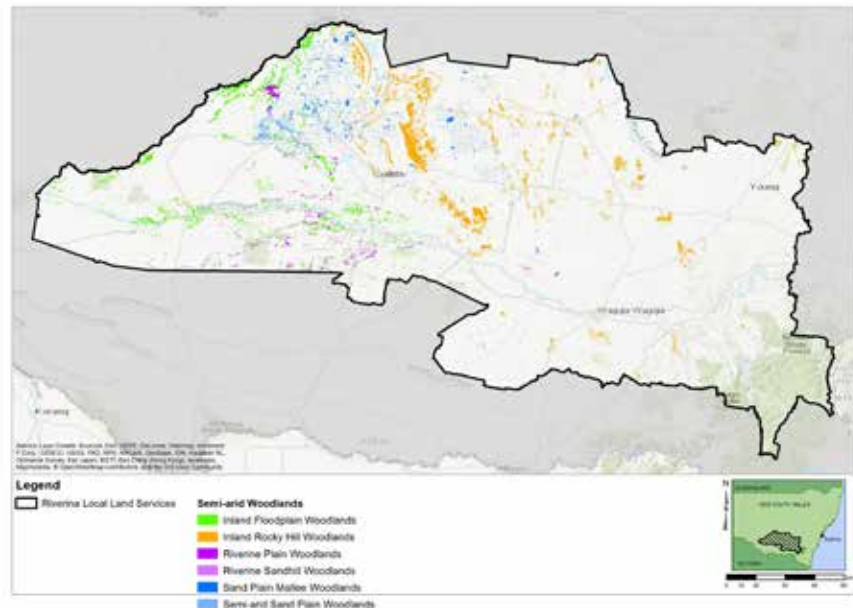


Figure 9: Keith Class - Inland Floodplain Woodlands



Inland Floodplain Woodland at Birdcage TSR

Inland Floodplain Shrublands

Distribution

Occasionally inundated depressions on semi-arid floodplain mostly west of Griffith.

Vegetation structure

Treeless shrubland up to 2 m tall with a sparse ground cover of grasses and forbs.

Main species

The shrub layer is dominated by nitre goosefoot and lignum and occasionally includes river cooba. The often-sparse understorey varies markedly in time from flooding with semi-aquatic rushes, grasses and forbs common post flooding and becoming sparser without flooding.

EEC presence

Myall woodland may adjoin this vegetation community.

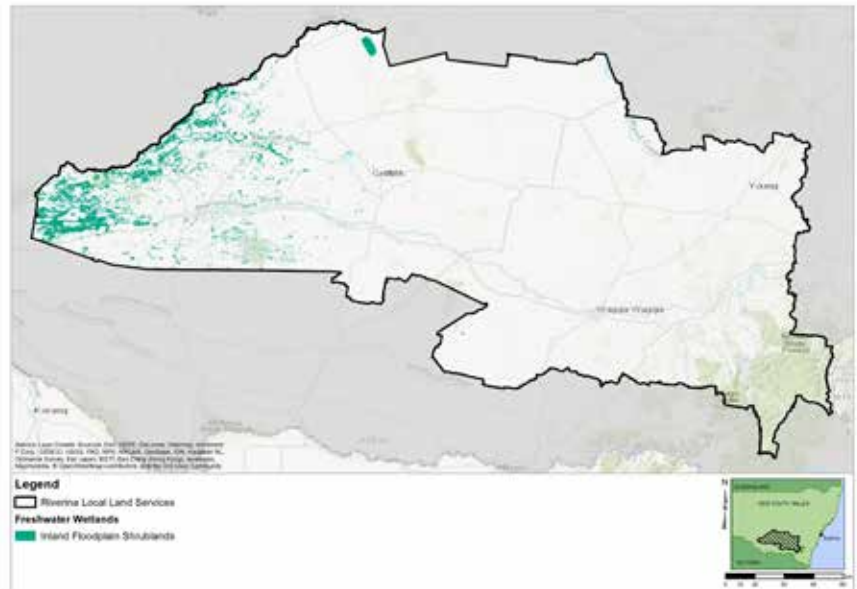


Figure 10: Keith Class - Inland Floodplain Shrublands



Inland Floodplain Shrubland near Oxley

Inland Rocky Hill Woodlands

Distribution

Occurs on sandy loams derived from sandstones and conglomerates on rocky hills and ranges receiving less than 500 mm rainfall. Scattered on the slopes and ridges of the Colinroobie Ranges north to Rankins Springs.

Vegetation structure

Open eucalypt and pine woodland with scattered shrubs and a sparse ground cover.

Main species

The overstorey is made up of Dwyer's red gum, kurrajong, white cypress pine and mugga ironbark (deeper soils). Often there is a well-developed shrub layer including drooping sheoak, currawang, other wattles, hobbushes and fringe-myrtle. Wiregrasses, speargrass and forbs including flax-lily make up the sparse ground layer.

EEC presence

Note this community grades into Western slopes dry sclerophyll forests with increasing rainfall (> 500mm) where the critically endangered EEC Mallee and Mallee-Broombush dominated woodland may occur.

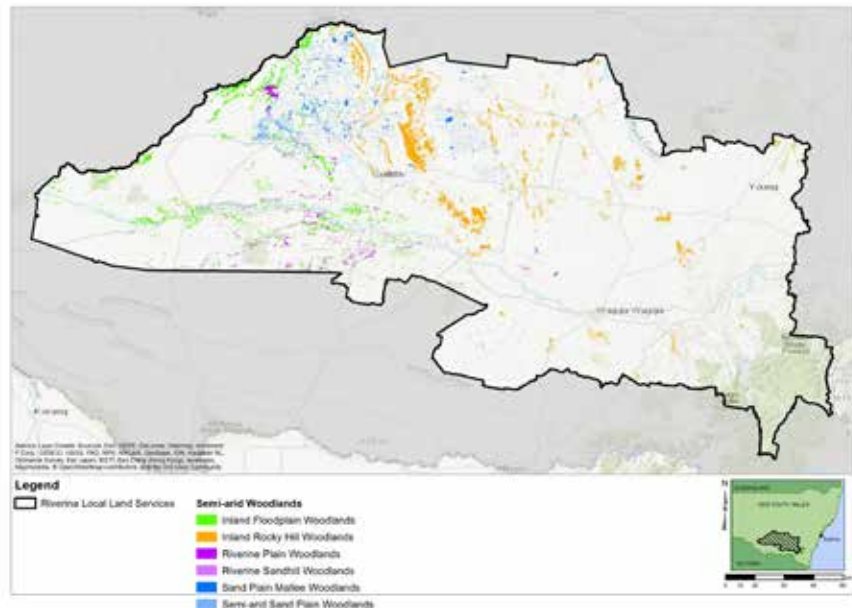


Figure 11: Keith Class - Inland Rocky Hill Woodlands



Inland Rocky Hill Woodland south of Colinroobie

Riverine Plain Woodlands

Distribution

Mostly occurs in the central parts of the region south of the Sturt Highway between Hay and Coleambally on red-brown earths and heavy textured grey and brown alluvial soils.

Vegetation structure

The overstorey of this more or less sparse low woodland grows to 10 m and is dominated by weeping myall (aka boree). The shrub layer is often sparse or absent and where present has many saltbushes, whilst the ground layer is often sparse.

Main species

The overstorey is dominated by boree and the shrub layer where present has many saltbushes e.g. thorny saltbush and occasional emu-bush and miljee. The often sparse ground layer may consist of windmill, umbrella and spear grasses, numerous spreading saltbushes and other forbs.

EEC presence

Weeping Myall occurs in this vegetation community.

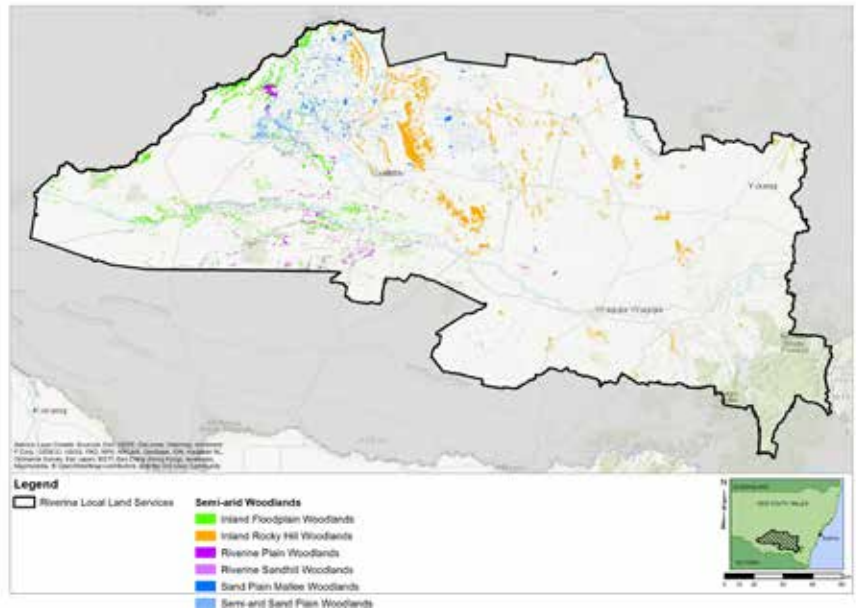


Figure 12: Keith Class - Riverine Plain Woodlands



Riverine Plain Woodland at Fernbank TSR

Riverine Plain Grasslands

Distribution

Riverine plains with red-grey-brown clays and clay loams mostly south of the Sturt Highway between Hay and Coleambally.

Vegetation structure

Mostly treeless with sparse shrubs over an often-diverse grass and forb ground layer.

Main species

Scattered boree and bluebush occur over a grassy layer consisting of wallaby, windmill and spear grasses on red-brown soils, while curly windmill grass is dominant on grey soils and where rainfall is lower in the west. The forb layer is frequently very diverse including many daisy and lily species in spring. Note there are several threatened species found in these vegetation community including red Darling pea, slender Darling-pea, turnip copperburr and plains-wanderer.

EEC presence

Two EPBC EECs, Natural Grasslands of the Murray Valley Plains and Seasonally Herbaceous Wetlands, are found in the habitats usually dominated by short wallaby grass and umbrella grass with shallow depression (aka gilgais).

Note OEH Riverine Plain Grasslands vegetation community profile does not recognize these EECs at this stage and states: *The riverine grasslands were apparently derived from Riverine Plains Woodlands, which were eliminated by heavy grazing. They are not shown on the reconstructed projection of native vegetation. They also share species with Riverine Chenopod Shrublands.*

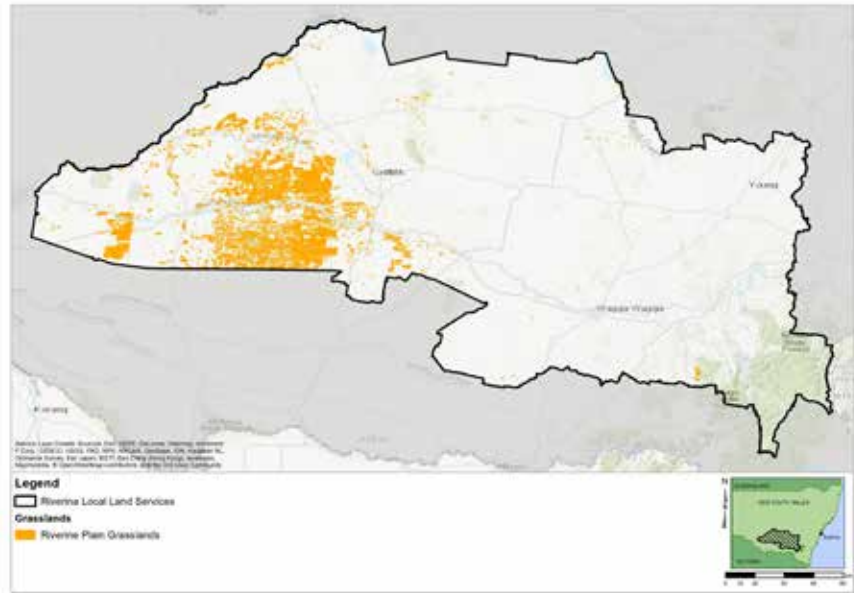


Figure 13: Keith Class - Riverine Plain Grasslands



Riverine Plain Grassland on Bundure TSR, north of Jerilderie

Riverine Chenopod Shrublands

Distribution

Seldom flooded parts of the lower Murrumbidgee and Lachlan floodplains and dry lake beds, often semi-saline, with deep grey-brown clays on semi-arid floodplains.

Vegetation structure

Open chenopod (saltbush) shrubland with a ground cover of forbs and grasses.

Main species

Numerous low chenopod shrubs including bladder, ruby and thorny saltbush, bluebush and dillon bush over a sparse understorey of grasses and forbs including daisies.

EEC presence

There are no EECs listed for this vegetation community.

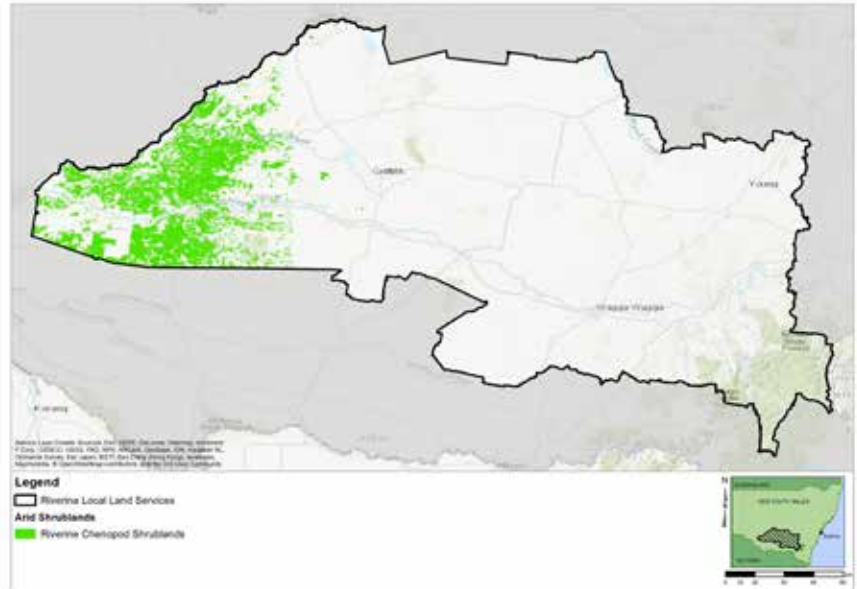


Figure 14: Keith Class - Riverine Chenopod Shrublands



Riverine Chenopod Shrubland on Yanga TSR, note the scattered old man saltbush

Sand Plain Mallee Woodlands

Distribution

Deep loamy red-brown sands on flat to low rises on sand plains and in dune swales west of Hay.

Vegetation structure

Mallee eucalypt woodland with many shrubs and a variable ground cover of saltbushes.

Main species

The overstorey usually consists of either red, white or yorrell mallee over a wide range of shrubby plants and vines.

EEC presence

Acacia melvillei Shrubland may occur in this vegetation community.

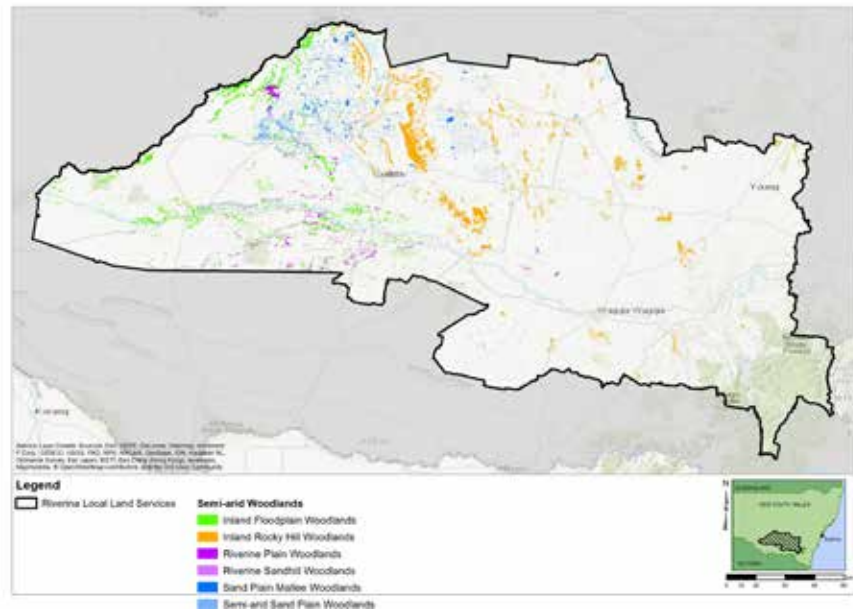


Figure 15: Keith Class - Sand Plain Mallee Woodlands



Sand Plain Mallee Woodlands

Semi-arid Sand Plain Woodlands

Distribution

Red-brown calcareous loams on level to gently undulating sand plains around Griffith and Hillston.

Vegetation structure

Open belah woodland with chenopod understorey.

Main species

The overstorey usually consists of either belah, rosewood or wilga over a wide range of shrubby plants and vines.

EEC presence

Acacia melvillei Shrubland often occurs in this vegetation community.

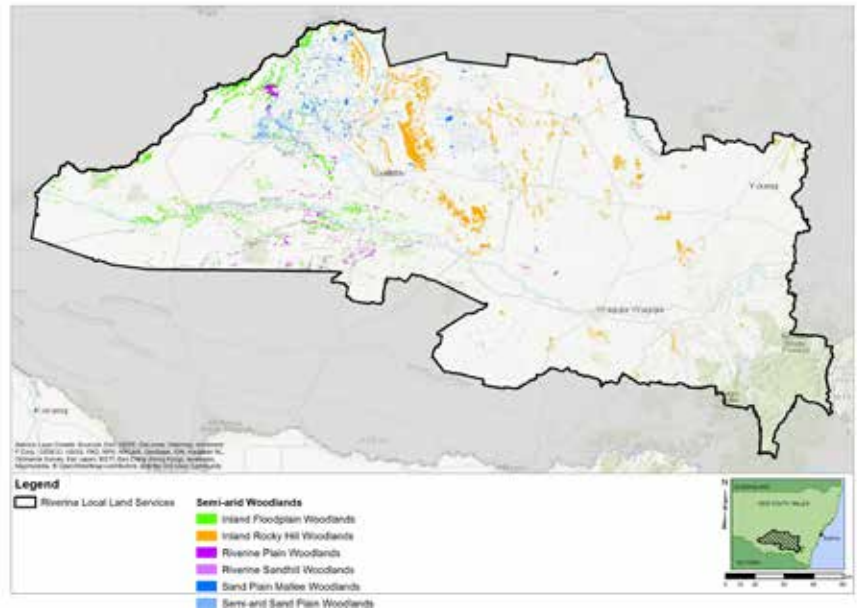


Figure 16: Keith Class - Semi-arid Sand Plain Woodlands



Semi-arid Sand Plain Woodland near Goolgowi



NSW and EPBC (Commonwealth) Endangered Ecological Communities (EECs) of the Riverina region

There are 10 NSW EECs known to occur in the Riverina Region and seven EPBC listed EECs. Table 1 below lists NSW and EPBC EECs including where they are comparable and provides their conservation status. Note the official listing name has been shortened in some cases for simplicity.

Table 1 NSW listed EECs and the comparable EPBC EECs occurring in the Riverina Local Land Services region

NSW EEC	Status	EPBC EEC	Status
Montane Peatlands and Swamps of the SE highland	E	Alpine Sphagnum Bogs and Associated Fens	E
Snow Gum Grassy Woodland in the NSW South Western Slopes	E	n/a	
White Box, Yellow Box and Blakely's Red Gum Woodland	E	Box-Gum Woodland	CE
Coolac-Tumut Serpentinite Shrubby Woodland in the NSW South Western Slopes and South Eastern Highlands Bioregions	E	n/a	
Mallee and Mallee-Broombush dominated woodland and shrubland, lacking Triodia, in the NSW South Western Slopes Bioregion	CE	n/a	
Inland Grey Box Woodland	E	Grey Box Woodland and derived grassland	E
Myall Woodland	E	Weeping Myall Woodland	E
Allocasuarina luehmannii Woodland	E	Buloke Woodland	E
Sandhill Pine Woodland	E	n/a	
Acacia melvillei Shrubland	E	n/a	
n/a		Natural Grasslands of the Murray Plains	CE
n/a		Seasonally Herbaceous Wetlands	CE

E = Endangered, CE = Critically endangered

The OEH Threatened biodiversity profile search link below allows searching by region and habitat type. The user can access detailed information regarding any of the vegetation community listed above, including distribution maps and threatened species and communities. The simplest method is to click on search by Region and Habitat, then select the appropriate sub-region e.g. Murray Fans from the drop-down box, select the appropriate habitat type e.g. Riverine Plain Woodlands from the drop-down and then select the preferred species type, including Threatened Ecological Community. www.environment.nsw.gov.au/threatenedspeciesapp/

NSW Endangered Ecological Communities

Montane Peatlands and Swamps of the South-Eastern Highlands

This plant community is associated with accumulated peaty or organic-mineral sediments on poorly drained flats in the headwaters of streams above 500 m elevation. The structure of these “bogs” may comprise small scattered trees e.g. mountain swamp gums a more or less dense shrub layer with soft-leaved sedges, grasses and forbs and importantly sphagnum moss. Micalong Swamp near Bondo is a good example of this EEC.

Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the NSW South Western Slopes

Occurs as a woodland or open woodland, characterised by the presence of snow gum, candlebark, ribbon gum and/or black sallee trees. Shrubs are sparse or absent and understorey is characterised by native grasses and a high diversity of herbs. The most common grasses include kangaroo grass, snow grasses, river tussock and various wallaby grasses. Forbs often include scaly buttons and everlasting daisy. The community commonly occurs above 600 on relatively fertile valley floors, margins of frost hollows and on footslopes and undulating hills.

White Box Yellow Box Blakely’s Red Gum Woodland aka Box-Gum Woodland

Is a woodland community occurring on relatively fertile soils where white box, yellow box and/or Blakely’s red gum is present. Shrubs are generally sparse or absent and the understorey is grassy with a high diversity of forbs, usually with kangaroo, tussock and/or wallaby grasses and forbs like common everlasting, scrambled eggs, small St John’s wort, New Holland daisy and blue bells. In the Riverina region this EEC is found mostly on low rises and slopes east of Lockhart and Ardlethan and matches the Western Slopes Grassy Woodlands vegetation community.

Coolac-Tumut Serpentinite Shrubby Woodland

Is a very open woodland community of drooping sheoak with the shrubs hickory wattle, grass trees and wedding bush (*Ricinocarpos bowmanii*). The ground layer has a range of native grasses and herbs, often including kangaroo grass, wire grasses, wallaby grasses, rock fern and sedge. Scattered trees of white box and bundy can occur. The woodland is restricted to soils derived from serpentinite in the Tumut-Coolac-Gundagai area. The largest occurrence is on the Honeysuckle range to the east of Tumut which extends from Argalong to the Murrumbidgee River. There are other smaller areas near Coolac and Gundagai.

Mallee and Mallee-Broombush dominated woodland and shrubland, lacking *Triodia*

Has a very highly restricted distribution, with known occurrences falling within a region of less than 4,000 km² bounded by Lake Cowal-Temora-Ardlethan-Ungarie. The community varies in structure from tall mallee woodland with an open to mid-dense shrub layer and ground cover to open or very dense mallee shrubland, with or without broombush (*Melaleuca uncinata*). This community typically has a canopy layer co-dominated by the mallee eucalypts bull mallee, white mallee, with either (on flat land) red mallee, or (on low rises) blue mallee and green mallee. This EEC occurs within the Western Slopes Dry Sclerophyll Forests or occasionally Inland Rocky Hill Woodlands vegetation classes.

Inland Grey Box Woodland in the Riverina, and NSW South Western Slopes

Is a woodland community found on relatively fertile soils, mostly on the plains east of Hay. Inland grey box is the characteristic overstorey species along with white cypress pine, buloke or yellow box and shrubs may be absent, sparse or common. A variable ground layer including wallaby, spear and umbrella grasses and herbaceous species is present at most sites. In the Riverina region this EEC often matches the Floodplain Transition Woodland vegetation class.

Myall Woodland in the Riverina and NSW South Western Slopes

Refer to the Riverine Plain Woodlands vegetation class as this EEC matches it.

Allocasuarina luehmannii Woodland in the Riverina and Murray-Darling Depression aka Buloke Woodlands

Allocasuarina luehmannii Woodland has been recorded in small patches west of Narrandera within this range. The community is dominated by an open tree canopy of Buloke with a sparse and highly variable ground layer dominated by grasses and herbs, sometimes with scattered shrubs and/or small trees. It may occur adjoining or nearby Sandhill Pine Woodland and Inland Grey Box Woodland communities.

Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes

This community is dominated by white cypress and matches the Riverine Sandhill Woodland vegetation class.

Acacia melvillei Shrubland in the Riverina and Murray-Darling Depression bioregions

This shrubland occurs in small patches and is dominated by yarran and typically has an open canopy of shrubs or small trees. Sometimes it has scattered mid-stratum shrubs, and with a sometimes sparse, but highly variable ground layer dominated by grasses, chenopods and herbs. In the Riverina region the community occurs on red-brown, sandy loam soils as scattered patches grading into Semi-arid Sand Plain Woodlands or Sand Plain Mallee.

Commonwealth EPBC EECs

Currently, of the seven EPBC listed EECs found in the Riverina region, five more or less match the similar NSW EEC and only the Natural Grasslands of the Murray Valley Plains and the Seasonally Herbaceous Wetlands EPBC EECs differ.

Alpine Sphagnum Bogs and Associated Fens

Refer to the Montane Peatlands and Swamps of the South Eastern Highlands NSW EEC.

White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (aka Box-Gum Woodland)

White Box Yellow Box Blakely's Red Gum Woodland NSW EEC.

Grey Box Woodland and Derived Grassland

Refer to the Inland Grey Box Woodland NSW EEC.

Weeping Myall Woodland

Refer to the Myall Woodland NSW EEC.

Buloke Woodland

Refer to the *Allocasuarina luehmannii* Woodland NSW EEC.

Natural Grasslands of the Murray Valley Plains

This community is found on red-grey-brown clays and clay loams mostly in the Urana-Jerilderie-Deniliquin area and is a subset of the Riverine Plain Grasslands vegetation class. This virtually treeless grassland has few shrubs and a diverse grass and herb understorey with grasses like wallaby, plains and umbrella common and many forbs e.g. daisies, found in spring.

Seasonally Herbaceous Wetlands

Occur on seasonally-filled drainage lines or depressions (aka gilgais) that are reliant on local rainfall and not riverine flooding to fill. They are generally treeless and dominated by semi-aquatic grasses and herbs that are often delineated by a sharp boundary in soil, topography or vegetation that distinguishes the wetland vegetation from any surrounding dryland vegetation. The surrounding dryland vegetation contains few or no specialised wetland plant species because it is rarely, if ever, flooded. In the Riverina region these gilgais are rare and are scattered amongst the Riverine Plain Grasslands vegetation community especially in the Coleambally area.

Site managed species

Note: Currently site managed species are only available for species and ecological communities for which a conservation project has been developed. To find out more and to use the OEH mapping tool go to the OEH threatened species website www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species and enter site managed species and navigate to the Riverina region.

In the Riverina region there are six site managed species (at January 2018) including:

Southern Bell Frog (*Litoria raniformis*)

These large frogs are usually found close to or in water or very wet areas in woodlands, shrublands and some rice bays. Their distribution in the Riverina includes the lower reaches of the Murrumbidgee River near Balranald and waterways associated with the Coleambally Irrigation system. The males have a very distinctive growling call of about one second duration - "crawark-crawark-crok-crok". It should be assumed that the Southern Bell Frog may be present in TSRs with low lying areas adjoining waterways within the areas described above.

Pomaderris cocoparrana

Shrub 1–3 m high with yellow flowers, in small terminal panicles. Sepals not persistent in fruit. Petals usually absent which is confined to the Cocoparra Ranges near Griffith and an isolated population east of the ranges on private land north of Ardlethan. This species may be present on TSRs abutting or near these areas on rocky.

Plains-wanderer (*Pedionomus torquatus*)

A small quail-like bird standing about 12-15 cm tall. Most of the records of plains-wanderers in NSW over the past 30 years come from an area of the western Riverina bounded by Hay and Narrandera on the Murrumbidgee River in the north, the Cobb Highway in the west, the Billabong Creek in the south, and Urana in the east. Any Riverine Plain Grasslands vegetation community dominated by short windmill and wallaby grass and forbs in the area defined has potential for Plains-wanderers to be present.

Malleefowl (*Pedionomus torquatus*)

A stocky ground-dwelling bird about the size of a domestic chicken. The males construct large nesting mounds in shrubby mallee habitat east of Weethalle. TSRs with Mallee like vegetation, especially if abutting larger tracts, near Weethalle may be assumed to be used by Malleefowl.

Booroolong frog (*Litoria booroolongensis*)

A medium sized tree frog growing to about 5 cm which is restricted to permanent waterways associated with the Adjungbilly Creek. TSRs abutting waterways within the Adjungbilly Creek drainage system can be assumed to contain Booroolong frogs.

Broad-toothed Rat (*Mastacomys fuscus*)

A plump, compact rodent, chubby-cheeked, with a short, wide face and ears, and long, dense, fine fur. It has been identified along the higher slopes abutting the Great Dividing Range where it makes grass runways amongst the dense wet grass, sedge and heath habitat it lives in. It is likely only to be found in TSRs that fall into the Montane Peatlands and Swamps EEC.

Recommended plant identification references

- Native trees and shrubs of SE Australia by Leon Costerman
- Grasses of the NSW tablelands – DPI
- Plants of Western NSW – Inkata Press
- Grassland Flora – a field guide for the Southern Tablelands
- Native vegetation guide for the Riverina





Local Land
Services