

### EVC/Bioregion Benchmark for Vegetation Quality Assessment

Murray Scroll Belt bioregion

EVC 86: Woorinen Sands Mallee

##### Description:

Mallee shrubland to 7 m tall, typically supporting a hummock grass (Triodia spp.) dominated understorey. This EVC could be considered intermediate between the heavier soil mallee woodlands and the lighter sandy soil mallee vegetation predominant on Lowan (siliceous) sand.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  15 cm | **#/ha**  30/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 25% | Eucalyptus dumosa  Eucalyptus leptophylla Eucalyptus socialis | Dumosa Mallee  Slender-leaf Mallee Grey Mallee |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 4 | 5% | MS |
| Small Shrub | 2 | 10% | SS |
| Prostrate Shrub | 1 | 5% | PS |
| Medium Herb | 6 | 5% | MH |
| Small or Prostrate Herb**\*** | 6 | 5% | SH |
| Hummock Grass | 1 | 15% | HG |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Medium to Tiny Non–tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

* Largely seasonal life form

##### Total understorey projective foliage cover 65%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Melaleuca lanceolata ssp. lanceolata | **Common Name**  Moonah |
| MS | Myoporum platycarpum | Sugarwood |
| MS | Dodonaea bursariifolia | Small Hop-bush |
| MS | Acacia wilhelmiana | Dwarf Nealie |
| SS | Sclerolaena parviflora | Mallee Copperburr |
| SS | Halgania cyanea | Rough Halgania |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Westringia rigida | Stiff Westringia |
| LH | Helichrysum leucopsideum | Satin Everlasting |
| LH | Waitzia acuminata var. acuminata | Orange Immortelle |
| MH | Podolepis capillaris | Invisible Daisy |
| MH | Goodenia willisiana | Sandhill Goodenia |
| MH | Vittadinia dissecta | Dissected New Holland Daisy |
| MH | Podotheca angustifolia | Sticky Long-heads |
| SH | Actinobole uliginosum | Flannel Cudweed |
| SH | Calotis hispidula | Hairy Burr-daisy |
| SH | Crassula sieberiana | Australian Stonecrop |
| SH | Ptilotus seminudis | Rabbit-tails |
| HG | Triodia scariosa | Porcupine Grass |
| MTG | Austrostipa mollis | Supple Spear-grass |
| MTG | Lomandra effusa | Scented Mat-rush |
| MTG | Lomandra leucocephala ssp. robusta | Woolly Mat-rush |
| MTG | Austrostipa elegantissima | Feather Spear-grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 86: Woorinen Sands Mallee - Murray Scroll Belt bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  15% cover  **Logs:**  10m/0.1 ha (note: large log class does not apply)  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea Olive high high LH Brassica tournefortii Mediterranean Turnip high high LH Opuntia spp. Prickly Pear high high  MH Gazania linearis Gazania high high  SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 97: Semi-arid Woodland

##### Description:

Non-eucalypt woodland or open forest to 12 m tall, of low rainfall areas. Occurs in a range of somewhat elevated positions not subject to flooding or inundation. The surface soils are typically light textured loamy sands or sandy loams.

|  |  |  |
| --- | --- | --- |
| **Large trees: Species** | **DBH(cm)** | **#/ha** |
| Casuarina spp.  Allocasuarina spp.  Callitris spp.  Myoporum platycarpum | 40 cm  40 cm  40 cm  35 cm | 20/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 20% | Casuarina pauper  Allocasuarina luehmannii Callitris gracilis ssp. murrayensis  Myoporum platycarpum | Belah  Buloke  Slender Cypress-pine Sugarwood |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 5 | 15% | MS |
| Small Shrub | 5 | 20% | SS |
| Large Herb\* | 2 | 5% | LH |
| Medium Herb\* | 7 | 5% | MH |
| Small or Prostrate Herb\* | 2 | 5% | SH |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |

* Largely seasonal life form

##### Total understorey projective foliage cover 75%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Alectryon oleifolius ssp. canescens | **Common Name**  Cattle Bush |
| MS | Acacia oswaldii | Umbrella Wattle |
| MS | Hakea tephrosperma | Hooked Needlewood |
| MS | Hakea leucoptera ssp. leucoptera | Silver Needlewood |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Olearia pimeleoides | Pimelea Daisy-bush |
| SS | Rhagodia spinescens | Hedge Saltbush |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| MH | Vittadinia dissecta s.l. | Dissected New Holland Daisy |
| MH | Calandrinia eremaea | Small Purslane |
| MH | Crassula colorata | Dense Crassula |
| SH | Actinobole uliginosum | Flannel Cudweed |
| MTG | Austrodanthonia caespitosa | Common Wallaby-grass |
| MTG | Austrostipa spp. | Spear-grass |
| MNG | Austrostipa elegantissima | Feather Spear-grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 97: Semi-arid Woodland - Murray Scroll Belt bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20% cover  **Logs:**  10m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Brassica tournefortii Mediterranean Turnip high high LH Reichardia tingitana Reichardia high low  MH Silene spp. Catchfly high high  SH Medicago minima Little Medic high high  MTG Schismus barbatus Arabian Grass high high MTG Pentaschistis airoides ssp. airoides False Hair-grass high high  MNG Bromus rubens Red Brome high high  MNG Vulpia myuros Rat's-tail Fescue high high MNG Critesion murinum subsp. glaucum Blue Barley-grass high high  SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 98: Semi-arid Chenopod Woodland

##### Description:

Sparse, low non-eucalypt woodland to 12 m tall of the arid zone with a tall open chenopod shrub-dominated understorey or a treeless, tall chenopod shrubland to 3 m tall. This EVC may occur as either a woodland (typically with a very open structure but tree cover >10%) or a shrubland (tree cover <10%) with trees as an occasional emergent.

+ woodland only components (ignore when assessing shrubland areas and standardise final score as appropriate)

##### Large trees+:

|  |  |  |
| --- | --- | --- |
| **Species** | **DBH(cm)** | **#/ha** |
| Casuarina pauper  Allocasuarina luehmannii Callitris gracilis  Myoporum platycarpum | 40 cm  40 cm  40 cm  35 cm | 15/ha |

**Tree Canopy Cover**+**:**

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 15% | Casuarina pauper  Allocasuarina luehmannii Myoporum platycarpum  Callitris gracilis ssp. murrayensis | Belah  Buloke Sugarwood  Slender Native Pine |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree+ |  | 5% | IT |
| Understorey Tree or Large Shrub+ | 3 | 10% | T |
| Medium Shrub | 2 | 40% | MS |
| Small Shrub | 4 | 15% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb\* | 2 | 5% | LH |
| Medium Herb\* | 6 | 15% | MH |
| Small or Prostrate Herb\* | 8 | 15% | SH |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 30% | S/C |

* Largely seasonal life form

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 98: Semi-arid Chenopod Woodland - Murray Scroll Belt bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T+ Alectryon oleifolius ssp. canescens Cattlebush  T+ Acacia melvillei Myall  T+ Hakea leucoptera ssp. leucoptera Silver Needlewood  MS Maireana pyramidata Shrubby Bluebush  MS Maireana sedifolia Pearl Bluebush  MS Atriplex nummularia Old Man Saltbush  MS Nitraria billardierei Nitre-bush  SS Sclerolaena obliquicuspis Limestone Copperburr  SS Sclerolaena tricuspis Three-spined Bassia  SS Sclerolaena divaricata Tangled Bassia  SS Enchylaena tomentosa var. tomentosa Ruby Saltbush  PS Sclerochlamys brachyptera Short-wing Saltbush  LH Polycalymma stuartii Poached-egg Daisy  MH Brachyscome lineariloba Hard-head Daisy  MH Osteocarpum acropterum var. deminutum Babbagia  MH Zygophyllum crenatum Hard-head Daisy  MH Zygophyllum ammophilum Sand Twin-leaf  SH *Calotis hispidula* Hairy Burr-daisy  SH *Plagiobothrys elachanthus* Hairy Forget-me-not  SH *Isoetopsis graminifolia* Grass Cushion  SH *Pogonolepis muelleriana* Stiff Cup-flower  **Recruitment:**  Continuous  **Organic Litter:**  5% in shrubland  15% in woodland.  **Logs**+**:**  5m/0.1ha  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Sonchus oleraceus Common Sow-thistle high low LH Brassica tournefortii Mediterranean Turnip high high LH Salvia verbenaca Wild Sage high high LH Sisymbrium erysimoides Smooth Mustard high high MH Reichardia tingitana False Sow-thistle low low MH Limonium spp. Sea-lavender high high  MH Silene apetala var. apetala Sand Catchfly high high MH Erodium cicutarium Common Heron's-bill high low  MH Carrichtera annua Ward’s Weed high high  SH Medicago minima Little Medic high high  MTG Schismus barbatus Arabian Grass high high MTG Critesion murinum ssp. glaucum Blue Barley-grass high high  MNG Bromus rubens Red Brome high high  MNG Vulpia spp. high high  Published by the Victorian Government Department of Sustainability and Environment May 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt Bioregion

## EVC 98\_61: Non-treed Semi-arid Chenopod Woodland

#### Description:

Sparse, low non-eucalypt woodland to 12 m tall of the arid zone with a tall open chenopod shrub-dominated understorey or a treeless, tall chenopod shrubland to 3 m tall. This EVC may occur as either a woodland (typically with a very open structure but tree cover >10%) or a shrubland (tree cover <10%) with trees as an occasional emergent.

**Understorey: Lifeform** Medium Shrub Small Shrub Prostrate Shrub Large Herb\* Medium Herb\*

Small or Prostrate Herb\* Large Non-Tufted Graminoid

Medium to Small Tufted Graminoid Medium to Tiny Non-Tufted Graminoid

#### #Spp %Cover LF Code

2 40% MS

4 15% SS

1. 1% PS
2. 5% LH

6 15% MH

8 15% SH

1. 5% LNG
2. 5% MTG

1 1% MNG

Bryophytes/Lichens 10% BL



Soil Crust 30% S/C

\*Largely seasonal lifeform

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  MS |  | **Species typical of at least part of EVC range**  *Atriplex nummularia* | **Common Name**  Old-man Saltbush |
| MS |  | *Maireana pyramidata* | Sago Bush |
| MS | r | *Maireana sedifolia* | Pearl Bluebush |
| MS |  | *Nitraria billardierei* | Nitre-bush |
| SS |  | *Enchylaena tomentosa var. tomentosa* | Ruby Saltbush |
| SS | k | *Sclerolaena divaricata* | Tangled Copperburr |
| SS |  | *Sclerolaena obliquicuspis* | Limestone Copperburr |
| SS |  | *Sclerolaena tricuspis* | Streaked Copperburr |
| PS |  | *Sclerochlamys brachyptera* | Short-wing Saltbush |
| LH |  | *Polycalymma stuartii* | Poached-eggs Daisy |
| MH |  | *Brachyscome lineariloba* | Hard-head Daisy |
| MH |  | *Osteocarpum acropterum var. deminutum* | Babbagia |
| MH |  | *Zygophyllum ammophilum* | Sand Twin-leaf |
| MH |  | *Zygophyllum crenatum* | Notched Twin-leaf |
| SH |  | *Calotis hispidula* | Hairy Burr-daisy |
| SH |  | *Isoetopsis graminifolia* | Grass Cushion |
| SH |  | *Plagiobothrys elachanthus* | Hairy Forget-me-not |
| SH |  | *Pogonolepis muelleriana* | Stiff Cup-flower |
| LNG |  | *Various spp.* |  |
| MTG |  | *Various spp.* |  |
| MNG |  | *Various spp.* |  |

Ecological Vegetation Class Bioregion Benchmark

|  |  |
| --- | --- |
| EVC 98\_61: Non-treed Semi-arid Chenopod Woodland | |
|  | **Recruitment:**  Continuous.  **Organic Litter:**  5 % cover  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH *Limonium spp.* Sea Lavender high high  MH *Carrichtera annua* Ward's Weed high high  SH *Medicago minima* Little Medic high high  LH *Salvia verbenaca* Wild Sage high high  MNG *Vulpia spp.* Fescue high high  MTG *Schismus barbatus* Arabian Grass high high MH *Silene apetala var. apetala* Mallee Catchfly high high LH *Sisymbrium erysimoides* Smooth Mustard high high MTG *Hordeum glaucum* Northern Barley-grass high high  MH *Erodium cicutarium* Common Heron's-bill high low  LH *Sonchus oleraceus* Common Sow-thistle high low  MH *Reichardia tingitana* False Sow-thistle low low  LH *Brassica tournefortii* Mediterranean Turnip high high  MNG *Bromus rubens* Red Brome high high  Published by the Victorian Government Department of Sustainability and Environment  © The State of Victoria Government Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-comercial is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson St, East Melbourne, Victoria 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss, of other consequences which may arise from you relying on any information in this publication.  [**www.dse.vic.gov.au**](http://www.dse.vic.gov.au/) |



**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 102: Low Chenopod Shrubland

##### Description:

Chenopod shrubland to 1 m tall occupying broad, flat alluvial terraces occur along the Murray River, west from Mildura to the border. Also found in narrow bands fringing raak and saline lakes such as Lake Tyrell and on relict lakebed surfaces such as Pine Plains. The field layer is characterised by succulents and a suite of annual herbs.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 1 | 5% | MS |
| Small Shrub | 4 | 25% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 6 | 25% | MH |
| Small or Prostrate Herb | 4 | 20% | SH |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Nitraria billardierei | **Common Name**  Nitre-bush |
| SS | Minuria cunninghamii | Bush Minuria |
| SS | Sclerolaena tricuspis | Three-spined Bassia |
| SS | Stelligera endecaspinis | Starfruit Bassia |
| SS | Atriplex vesicaria | Bladder Saltbush |
| PS | Sclerochlamys brachyptera | Short-wing Saltbush |
| PS | Osteocarpum acropterum var. deminutum | Babbagia |
| LH | Senecio pinnatifolius | Variable Groundsel |
| MH | Brachyscome lineariloba | Hard-head Daisy |
| MH | Senecio glossanthus | Slender Groundsel |
| MH | Crassula colorata | Dense Crassula |
| MH | Goodenia pusilliflora | Small-flower Goodenia |
| SH | Disphyma crassifolium ssp. clavellatum | Rounded Noon-flower |
| SH | Pogonolepis muelleriana | Stiff Cup-flower |
| SH | Isoetopsis graminifolia | Grass Cushion |
| MTG | Austrostipa eremophila | Desert Spear-grass |
| TTG | Hypoxis glabella var. glabella | Tiny Star |

##### Recruitment:

Continuous

##### Organic Litter:

5% cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 102: Low Chenopod Shrubland - Murray Scroll Belt bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Sonchus oleraceus Common Sow-thistle high low LH Brassica tournefortii Mediterranean Turnip high high  MH Reichardia tingitana False Sow-thistle high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Carrichtera annua Ward’s Weed high high  MH Spergularia diandra Lesser Sand-spurrey high low  SH Medicago minima Little Medic high high SH Spergularia rubra s.l. Red Sand-spurrey high low  MTG Critesion murinum subsp. glaucum Blue Barley-grass high high  MNG Bromus rubens Red Brome high high  MNG Vulpia bromoides Squirrel-tail Fescue high high  SNG Schismus barbata Arabian Grass high high  SNG Lamarckia aurea Golden-top high low  SNG Parapholis incurva Coast Barb-grass high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 103: Riverine Chenopod Woodland (syn. Black Box Chenopod Woodland)

##### Description:

Eucalypt woodland to 15 m tall with a diverse shrubby and grassy understorey occurring on most elevated riverine terraces. Confined to heavy clay soils on higher level terraces within or on the margins of riverine floodplains (or former floodplains), naturally subject to

only extremely infrequent incidental shallow flooding from major events if at all flooded.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus largiflorens | **DBH(cm)**  40 cm | **#/ha**  5/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus largiflorens  Acacia stenophylla | Black Box  River Coobah |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 3 | 30% | MS |
| Small Shrub | 5 | 25% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Medium Herb | 5 | 5% | MH |
| Small or Prostrate Herb\* | 5 | 10% | SH |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Soil Crust | na | 10% | S/C |

* Largely seasonal life form

##### Total understorey projective foliage cover 60%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Atriplex nummularia | **Common Name**  Old-man Saltbush |
| MS | Chenopodium nitrariaceum | Nitre Goosefoot |
| MS | Eremophila divaricata ssp. divaricata | Spreading Emu-bush |
| SS | Sclerolaena tricuspis | Streaked Copperburr |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| SS | Atriplex lindleyi | Flat-top Saltbush |
| SS | Rhagodia spinescens | Hedge Saltbush |
| PS | Sclerochlamys brachyptera | Short-wing Saltbush |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| MH | Calocephalus sonderi | Pale Beauty-heads |
| MH | Senecio glossanthus | Slender Groundsel |
| MH | Brachyscome lineariloba | Hard-head Daisy |
| SH | Disphyma crassifolium ssp. clavellatum | Rounded Noon-flower |
| SH | Maireana pentagona | Hairy Bluebush |

**Recruitment:**

Continuous

##### Organic Litter:

10 % cover

##### Logs:

5m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 103: Riverine Chenopod Woodland (syn. Black Box Chenopod Woodland) - Murray Scroll Belt Bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea subsp. europaea Olive high high MS Lycium ferocissimum African Boxthorn high high  LH Sisymbrium erysimoides Smooth Mustard high high  LH Critesion spp. Barley-grass high low  LH Gazania linearis Gazania high high  LH Opuntia spp. Cactus high high  LH Sisymbrium irio London Mustard high high LH Psilocaulon granulicaule Noon-flower high high  MH Limonium sinuatum Notch-leaf Sea-lavender high high  MH Limonium lobatum Winged Sea-lavender high high MH Trifolium arvense var. arvense Hare's-foot Clover high low  MH Mesembryanthemum nodiflora Ice-plant high high  MH Carrichtera annua Ward’s Weed high high  MH Marrubium vulgare Horehound high high MH Carpobrotus aequilaterus Angled Pigface high high  MH Silene apetala var. apetala Sand Catchfly high low  MH Medicago spp. Medic high low  MH Oxalis pes-caprae Soursob high high  MH Silene gallica French Catchfly high low  MH Silene nocturna Mediterranean Catchfly high low SH Mesembryanthemum crystallinum Common Ice-plant high high  MTG Vulpia bromoides Squirrel-tail Fescue high high  MTG Lolium rigidum Wimmera Rye-grass high low  MTG Asphodelus fistulosus Onion Weed high high  MNG Bromus rubens Red Brome high high  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Bromus spp. Brome high high  MNG Schismus barbatus Arabian Grass high low  SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 104: Lignum Swamp

##### Description:

Typically treeless shrubland to 4 m tall with robust (but sometimes patchy) growth of lignum. Widespread wetland vegetation type in low rainfall areas on heavy soils, subject to infrequent inundation resulting from overbank flows from rivers or local runoff.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 1 | 20% | MS |
| Large Herb\* | 4 | 5% | LH |
| Medium Herb\* | 8 | 25% | MH |
| Small or Prostrate Herb\* | 2 | 10% | SH |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid\* | 2 | 5% | MNG |
| Scrambler or Climber | 1 | 1% | SC |
| Soil crust\* | na | 10% | S/C |

* + Largely seasonal life form

##### Total understorey projective foliage cover 75%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Muehlenbeckia florulenta | **Common Name**  Tangled Lignum |
| MS | Chenopodium nitrariaceum | Nitre Goosefoot |
| SS | Sclerolaena tricuspis | Three-spined Bassia |
| SS | Sclerolaena muricata | Five-spined Bassia |
| LH | Rumex spp. | Dock |
| MH | Marsilea drummondii | Common Nardoo |
| MH | Goodenia spp. | Goodenia |
| MH | Ranunculus spp. | Buttercup |
| LNG | Eragrostis australasica | Cane Grass |
| MNG | Eragrostis infecunda | Barren Cane grass |
| MTG | Juncus spp. | Rush |
| MNG | Eleocharis spp. | Spike-sedge |
| SC | Asperula gemella | Twin-leaf Bedstraw |

**Recruitment:**

Continuous

##### Organic Litter:

5% cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code**  SH | **Typical Weed Species**  Phyla canescens | **Common Name**  Lippia | **Invasive**  high | **Impact**  high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 104: Lignum Swamp - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 106: Grassy Riverine Forest

##### Description:

Occurs on the floodplain of major rivers, in a slightly elevated position where floods are infrequent, on deposited silts and sands, forming fertile alluvial soils. River Red Gum forest to 25 m tall with a groundlayer dominated by tussock-forming graminoids. Occasional tall shrubs present.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  90 cm | **#/ha**  20 / ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus camaldulensis | River Red-gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Small Shrub | 2 | 1% | SS |
| Large Herb | 7 | 10% | LH |
| Medium Herb | 10 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Medium to Small Tufted Graminoid | 3 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **60%** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  SS |  | **Species typical of at least part of EVC range**  Rhagodia spinescens | **Common Name**  Hedge Saltbush |
| SS |  | Glycyrrhiza acanthocarpa | Southern Liquorice |
| SS |  | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| LH |  | Wahlenbergia fluminalis | River Bluebell |
| LH |  | Senecio pinnatifolius | Variable Groundsel |
| LH | k | Senecio cunninghamii var. cunninghamii | Branching Groundsel |
| MH |  | Calotis scapigera | Tufted Burr-daisy |
| MH |  | Teucrium racemosum s.l. | Grey Germander |
| MH |  | Morgania glabra spp. agg. | Blue Rod |
| MH |  | Brachyscome lineariloba | Hard-head Daisy |
| SH |  | Chamaesyce drummondii | Flat Spurge |
| SH |  | Epaltes australis | Spreading Nut-heads |
| LTG |  | Cyperus gymnocaulos | Spiny Flat-sedge |
| MTG |  | Setaria jubiflora | Warrego Summer-grass |
| MTG |  | Lachnagrostis filiformis | Common Blown-grass |

**Recruitment:**

Continuous

##### Organic Litter:

40 % cover

##### Logs:

30 m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 106: Grassy Riverine Forest - Murray Scroll Belt bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Brassica tournefortii Mediterranean Turnip high low LH Solanum nigrum sensu Willis (1972) Black Nightshade high high  LH Sonchus asper s.l. Rough Sow-thistle high low  LH Centaurea melitensis Malta Thistle high high  MH Reichardia tingitana False Sow-thistle high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MTG Schismus barbatus Arabian Grass high low MTG Critesion murinum ssp. glaucum Blue Barley-grass high low  MNG Bromus rubens Red Brome high low  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 107: Lake Bed Herbland

##### Description:

Herbland or shrubland to 0.5 m tall dominated by species adapted to drying mud within lake beds. Some evade periods of prolonged inundation as seed, others as dormant tuber-like rootstocks. Occupies drying deep-cracking mud of lakes on floodplains. Floods are intermittent but water may be retained for several seasons leading to active growth at the ‘drying mud stage’.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms:** |  | | |
| **Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 2 | 5% | SS |
| Medium Herb\* | 3 | 25% | MH |
| Small or Prostrate Herb\* | 3 | 20% | SH |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |

* Largely seasonal life form

##### Total understorey projective foliage cover 60%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Malva australiana s.l. | **Common Name**  Southern Hollyhock |
| MS | Solanum simile | Oondoroo |
| SS | Glycyrrhiza acanthocarpa | Southern Liquorice |
| SS | Muehlenbeckia horrida ssp. horrida | Spiny Lignum |
| MH | Chenopodium pumilio | Clammy Goosefoot |
| MH | Chenopodium glaucum | Glaucous Goosefoot |
| SH | Glossostigma elatinoides | Small Mud-mat |
| SH | Glinus lotoides | Hairy Carpet-weed |
| SH | Mukia micrantha | Mallee Cucumber |

**Recruitment:**

Episodic/Flood. Desirable period between disturbances is 10 years.

##### Organic Litter:

5% cover

##### Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 107: Lake Bed Herbland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 158: Chenopod Mallee

##### Description:

Open to very open mallee woodland to 12 m tall (almost invariably dominated by Eucalyptus gracilis) supported by thin Woorinen deposits typically overlying gypsiferous and sodic clays. In undisturbed remnants this EVC is characterised by the dominance of saltbushes and semi-succulent understorey shrubs.

##### Large trees:

|  |  |  |
| --- | --- | --- |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp. | 20 cm | 20/ha |

**Tree Canopy Cover:**

**% cover Character Species Common Name**

|  |  |  |
| --- | --- | --- |
| 20% | Eucalyptus gracilis | Yorrell |
|  | Eucalyptus oleosa ssp. oleosa | Oil Mallee |
|  | Eucalyptus dumosa | Dumosa Mallee |

**Understorey:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 1 | 5% | MS |
| Small Shrub | 9 | 45% | SS |
| Medium Herb | 3 | 5% | MH |
| Small or Prostrate Herb | 2 | 10% | SH |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 15% | S/C |
| **Total understorey projective foliage cover** |  | **65%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Maireana pyramidata | **Common Name**  Black Bluebush |
| SS | Atriplex lindleyi | Baldoo |
| SS | Atriplex vesicaria ssp. variabilis | Bladder Salt-bush |
| SS | Zygophyllum aurantiacum ssp. aurantiacum | Shrubby Twin-leaf |
| SS | Nitraria billardierei | Nitre-bush |
| MH | Eriochiton sclerolaenoides | Woolly-fruit Bluebush |
| MH | Zygophyllum apiculatum | Pointed Twin-leaf |
| MH | Zygophyllum crenatum | Notched Twin-leaf |
| SH | Calandrinia eremaea | Small Purslane |
| SH | Disphyma crassifolium ssp. clavellatum | Rounded Noon-flower |

**Recruitment:**

Continuous (excluding overstorey)

##### Organic Litter:

10% cover

##### Logs:

10m/0.1 ha (note: large log class does not apply)

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 158: Chenopod Mallee – Murray Scroll Belt bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Opuntia spp. Prickly Pear low high  LH Psilocaulon granulicaule Noon-flower high high  LH Gazania linearis Gazania high high  LH Salvia verbenaca var. vernalis Wild Sage high high LH Critesion murinum subsp. leporinum Wall Barley-grass high low  LH Sisymbrium erysimoides Smooth Mustard high high  MH Carpobrotus aequilaterus Angled Pigface low high  MH Brassica tournefortii Mediterranean Turnip high high MH Mesembryanthemum nodiflora Ice-plant high high  MH Carrichtera annua Ward’s Weed high high  MH Marrubium vulgare Horehound high high SH Mesembryanthemum crystallinum Common Ice-plant high high  MTG Lolium rigidum Wimmera Rye-grass high low  MNG Schismus barbatus Arabian Grass high high  MNG Bromus spp. Brome high high  SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 806: Alluvial Plains Semi-arid Grassland

##### Description:

Grassland (turf) to herbland to < 0.2 m tall with only incidental shrubs. Flood-promoted flora, potentially including a wide range of opportunistic ephemeral / annual species occupying low-lying areas within at least previously flood-prone (mostly) higher-level terraces, which may be effectively shallow lakes when flooded. Also sometimes on flats along creeks of the further north-west, in habitat akin to that of Floodway Pond Herbland.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** Medium Shrub | **#Spp**  1 | **%Cover**  5% | **LF code**  MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Medium to Small Tufted Graminoid | 3 | 50% | MTG |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **85%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Muehlenbeckia florulenta | **Common Name**  Tangled Lignum |
| MS | Chenopodium nitrariaceum | Nitre-bush |
| SS | Sclerolaena tricuspis | Three-spined Bassia |
| SS | Muehlenbeckia horrida ssp. horrida | Spiny Lignum |
| SS | Sclerochlamys brachyptera | Short-wing Saltbush |
| LH | Senecio glossanthus | Slender Groundsel |
| LH | Wahlenbergia fluminalis | River Bluebell |
| MH | Calocephalus sonderi | Pale Beauty-heads |
| MH | Spergularia sp. 3 | Slender Groundsel |
| MH | Haloragis aspera | Rough Raspwort |
| MH | Plantago cunninghamii | Clay Plantain |
| SH | Isoetopsis graminifolia | Grass Cushion |
| SH | Myosurus minimus var. australis | Mouse-tail |
| MTG | Sporobolus mitchellii | Rat-tail Couch |

##### Recruitment:

Episodic/Flood. Desirable period between disturbances is 5 years.

##### Organic Litter:

5% cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH LH  MH MH  MH MH  SH SH  MTG MNG MNG  SNG SNG  SNG | Sonchus oleraceus Brassica tournefortii  Reichardia tingitana Hypochoeris glabra  Carrichtera annua Spergularia diandra  Medicago minima Spergularia rubra s.l.  Critesion murinum subsp. glaucum Bromus rubens  Vulpia bromoides  Schismus barbata Lamarckia aurea  Parapholis incurva | Common Sow-thistle Mediterranean Turnip  False Sow-thistle Smooth Cat's-ear  Ward’s Weed  Lesser Sand-spurrey Little Medic  Red Sand-spurrey  Blue Barley-grass Red Brome Squirrel-tail Fescue Arabian Grass Golden-top  Coast Barb-grass | high high  high high  high high  high high  high high high  high high  high | low high  low low  high low  high low  high high high  high low  high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 806: Alluvial Plains Semi-arid Grassland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 807: Disused Floodway Shrubby Herbland

##### Description:

Low open chenopod shrubland (to herbland) occurring along floodway channels which are disused under current river flows. Vegetation comprises mixtures of small chenopods that have colonised under drier conditions and at least sparse remnant component of herb species associated with floodways.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Small Shrub | 4 | 25% | SS |
| Prostrate Shrub | 1 | 5% | PS |
| Large Herb | 1 | 5% | LH |
| Medium Herb | 3 | 10% | MH |
| Small or Prostrate Herb\* | 2 | 10% | SH |
| \* Largely seasonal life form |  |  |  |
| **Total understorey projective foliage cover** |  | **40%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  SS | **Species typical of at least part of EVC range**  Atriplex lindleyi | **Common Name**  Flat-top Saltbush |
| SS | Atriplex suberecta | Sprawling Saltbush |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| PS | Atriplex semibaccata | Berry Saltbush |
| LH | Stemodia florulenta | Blue Rod |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| SH | Epaltes australis | Spreading Nut-heads |

##### Recruitment:

Continuous

##### Organic Litter:

10% cover

##### Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 807: Disused Floodway Shrubby Herbland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 808: Lignum Shrubland

##### Description:

Relatively open shrubland of species of divaricate growth form. The ground-layer is typically herbaceous or a turf grassland, rich in annual/ephemeral herbs and small chenopods. Characterised the open and even distribution of relatively small Lignum shrubs. Occupies heavy soil plains along Murray River, low-lying areas on higher-level (but still potentially flood-prone) terraces.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 2 | 30% | MS |
| Small Shrub | 3 | 10% | SS |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb\* | 5 | 5% | SH |
| Large Non-tufted Graminoid | 1 | 10% | LNG |
| Medium to Small Tufted Graminoid | 2 | 20% | MTG |
| Soil Crust | na | 10% | S/C |

* Largely seasonal life form

##### Total understorey projective foliage cover 75%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Muehlenbeckia florulenta | **Common Name**  Tangled Lignum |
| MS | Chenopodium nitrariaceum | Nitre-bush |
| SS | Sclerolaena tricuspis | Three-spined Bassia |
| SS | Sclerochlamys brachyptera | Short-wing Saltbush |
| LH | Senecio glossanthus | Slender Groundsel |
| MH | Plantago cunninghamii | Clay Plantain |
| MH | Brachyscome lineariloba | Hard-headed Daisy |
| MH | Brachyscome ciliaris | Variable Daisy |
| MH | Calocephalus sonderi | Pale Beauty-heads |
| SH | Isoetopsis graminifolia | Grass Cushion |
| SH | Rhodanthe corymbiflora | Paper Sun-ray |
| SH | Atriplex leptocarpa | Slender-fruit Saltbush |
| SH | Tetragonia eremaea s.l. | Annual Spinach |
| LNG | Eragrostis australasica | Cane-grass |
| MTG | Sporobolus mitchellii | Rat-tail Couch |
| MTG | Setaria jubiflora | Warrego Summer-grass |

**Recruitment:**

Continuous

##### Organic Litter:

10% cover

##### Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 808: Lignum Shrubland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 809: Floodplain Grassy Wetland

#### Description:

Wetland dominated by floating aquatic grasses (which persist to some extent as turf during drier periods), occurring in the most flood-prone riverine areas. Typically treeless, but sometimes with thickets of saplings or scattered more mature specimens of Eucalyptus camaldulensis. Occupies temporary shallow lakes in the most flood-prone riverine areas, also occurs as a narrow intermediate band around some floodway ponds.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Herb | 5 | 10% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 4 | 60% | MNG |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MH | **Species typical of at least part of EVC range**  Myriophyllum crispatum | **Common Name**  Upright Milfoil |
| MH | Ludwigia peploides ssp. montevidensis | Clove-strip |
| MH | Nymphoides crenata | Wavy Marshwort |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| SH | Azolla filiculoides | Pacific Azolla |
| SH | Persicaria prostrata | Creeping Knotweed |
| LTG | Juncus ingens | Giant Rush |
| MTG | Lachnagrostis filiformis | Common Blown Grass |
| MTG | Sporobolus mitchellii | Brown-back Wallaby-grass |
| MNG | Pseudoraphis spinescens | Spiny Mud-grass |
| MNG | Amphibromus fluitans | River Swamp Wallaby-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Cynodon dactylon var. pulchellus | Native Couch |

#### Recruitment:

Episodic/Flood. Desirable period between disturbances is 5 years.

#### Organic Litter:

10% cover

#### Logs:

5 m/0.1 ha.(where trees are overhanging the wetland)

#### Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 809: Floodplain Grassy Wetland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 810: Floodway Pond Herbland

##### Description:

Low herbland to < 0.3 m tall with occasional emergent life forms, usually with a high content of ephemeral species. Floors of ponds associated with floodway systems. Typically heavy deeply cracking clay soils. Characteristically smaller wetlands with a more regular flooding and drying cycle in comparison to sites supporting Lake Bed Herbland.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 5 | 20% | MH |
| Small or Prostrate Herb\* | 4 | 15% | SH |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 20% | MNG |

\* Largely seasonal life form

##### Total understorey projective foliage cover 65%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MH | **Species typical of at least part of EVC range**  Persicaria prostrata | **Common Name**  Creeping Knotweed |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| MH | Alternanthera denticulata s.l. | Lesser Joyweed |
| SH | Polygonum plebeium | Small Knotweed |
| SH | Dysphania glomulifera ssp. glomulifera | Globular Pigweed |
| SH | Lemna disperma | Common Duckweed |
| MTG | Lachnagrostis filiformis | Common Blown-grass |
| MNG | Pseudoraphis spinescens | Spiny Mud Grass |
| MNG | Carex gaudichaudiana | Fen Sedge |
| MNG | Eleocharis acuta | Common Spike-sedge |

**Recruitment:**

Episodic/Flood. Desirable period between disturbances is 5 years.

##### Organic Litter:

5% cover

##### Logs:

5 m/0.1 ha.(where trees are overhanging the wetland)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code**  MH | **Typical Weed Species**  Callitriche stagnalis | **Common Name**  Water Starwort | **Invasive**  high | **Impact**  high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 810: Floodway Pond Herbland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 813: Intermittent Swampy Woodland

##### Description:

Eucalypt woodland to 15 m tall with a variously shrubby and rhizomatous sedgy - turf grass understorey, at best development dominated by flood stimulated species in association with flora tolerant of inundation. Flooding is unreliable but extensive when it happens. Occupies low elevation areas on river terraces (mostly at the rear of point-bar deposits or adjacent to major floodways) and lacustrine verges (where sometimes localised to narrow transitional bands). Soils often have a shallow sand layer over heavy and frequently slightly brackish soils.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus camaldulensis  Eucalyptus largiflorens | 70 cm  50 cm | 15 / ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus camaldulensis  Eucalyptus largiflorens | River Red-gum  Black Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 1 | 5% | MS |
| Small Shrub | 1 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 5 | 10% | MH |
| Small or Prostrate Herb | 1 | 5% | SH |
| Medium to Small Tufted Graminoid | 3 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 10% | MNG |
| **Total understorey projective foliage cover** |  | **70%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia stenophylla | **Common Name**  River Coobah |
| MS | Muehlenbeckia florulenta | Tangled Lignum |
| SS | Cressa cretica | Rosinweed |
| LH | Stemodia florulenta | Blue Rod |
| LH | Wahlenbergia fluminalis | River Bluebell |
| MH | Haloragis aspera | Rough Raspwort |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| MH | Calocephalus sonderi | Pale Beauty-heads |
| SH | Epaltes australis | Spreading Nut-heads |
| MTG | Sporobolus mitchellii | Rat-tail Couch |
| MTG | Cyperus gymnocaulos | Spring Flat-sedge |
| MTG | Lachnagrostis filiformis | Common Blown-grass |
| MNG | Cynodon dactylon var. pulchellus | Native Couch |

**Recruitment:**

Continuous

##### Organic Litter:

20 % cover

##### Logs:

20 m/0.1 ha.

##### Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 813: Intermittent Swampy Woodland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 818: Shrubby Riverine Woodland

##### Description:

Eucalypt woodland to open forest to 15 m tall of less flood-prone (riverine) watercourse fringes, principally on levees and higher sections of point-bar deposits. The understorey includes a range of species shared with drier floodplain habitats with a sparse shrub component, ground-layer patchily dominated by various life-forms. A range of large dicot herbs (mostly herbaceous perennial, several with a growth-form approaching that of small shrub) are often conspicuous.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus largiflorens Eucalyptus camaldulensis | 50 cm  80 cm | 5/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus largiflorens  Eucalyptus camaldulensis | Black Box  River Red-gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 2 | 10% | MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 4 | 10% | LH |
| Medium Herb | 5 | 10% | MH |
| Small or Prostrate Herb\* | 2 | 1% | SH |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |

* Largely seasonal life form

##### Total understorey projective foliage cover 50%

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  T |  | **Species typical of at least part of EVC range**  Acacia stenophylla | **Common Name**  River Coobah |
| MS |  | Muehlenbeckia florulenta | Tangled Lignum |
| MS |  | Chenopodium nitrariaceum | Nitre Goosefoot |
| SS |  | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| PS |  | Sclerochlamys brachyptera | Short-wing Saltbush |
| LH | k | Senecio cunninghamii var. cunninghamii | Branching Groundsel |
| LH |  | Senecio pinnatifolius | Mallee Groundsel |
| LH |  | Xerochrysum bracteatum | Golden Everlasting |
| MH |  | Calotis cuneifolia | Blue Burr-daisy |
| MH | k | Lotus australis | Austral Trefoil |
| MH | r | Picris squarrosa | Squat Picris |
| MH |  | Teucrium racemosum s.l. | Grey Germander |
| MTG |  | Setaria jubiflora | Warrego Summer-grass |

**Recruitment:**

Continuous

##### Organic Litter:

10% cover

##### Logs:

10m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 818: Shrubby Riverine Woodland - Murray Scroll Belt bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea subsp. europaea Olive high high  MS Lycium ferocissimum Boxthorn high high LH Sisymbrium erysimoides Smooth Mustard high high  LH Critesion spp. Barley-grass high low  LH Gazania linearis Gazania high high  LH Opuntia spp. Prickly Pear low high  LH Sisymbrium irio London Mustard high high LH Psilocaulon granulicaule Noon-flower high high  MH Limonium sinuatum Notch-leaf Sea-lavender high high  MH Limonium lobatum Winged Sea-lavender high high MH Trifolium arvense var. arvense Hare's-foot Clover high low MH Mesembryanthemum nodiflora Ice-plant high high  MH Carrichtera annua Ward’s Weed high high  MH Marrubium vulgare Horehound high high MH Carpobrotus aequilaterus Angled Pigface low high  MH Silene apetala var. apetala Sand Catchfly high low  MH Medicago spp. Medic high low  MH Oxalis pes-caprae Soursob high high  MH Silene gallica French Catchfly high low  MH Silene nocturna Mediterranean Catchfly high low SH Mesembryanthemum crystallinum Common Ice-plant high high  MTG Vulpia bromoides Squirrel-tail Fescue high high  MTG Lolium rigidum Wimmera Rye-grass high low MTG Asphodelus fistulosus Onion Weed high high  MNG Bromus rubens Red Brome high high  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Bromus spp. Brome high high  MNG Schismus barbatus Arabian Grass high low  SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 819: Spike-sedge Wetland

##### Description:

Low sedgy vegetation of species-poor seasonal or intermittent wetlands, dominated by spike-sedges. Typically treeless, but sometimes with thickets of saplings or scattered more mature specimens of Eucalyptus camaldulensis. Mostly confined to a narrow ring around the upper margins of floodway ponds. Soils are typically heavy clays (e.g. mottled yellow-grey clay, grey loamy clay), occasionally silty near the surface. In some riverine sites, annual inundation is not reliable and the rhizomic rootstocks of Eleocharis acuta appear capable of surviving at least occasional periods of longer dormancy.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Large Herb | 1 | 5% | LH |
| Medium Herb | 6 | 15% | MH |
| Small or Prostrate Herb | 4 | 5% | SH |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 50% | MNG |
| **Total understorey projective foliage cover** |  | **75%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  LH | **Species typical of at least part of EVC range**  Senecio quadridentatus | **Common Name**  Cottony Fireweed |
| MH | Myriophyllum crispatum | Upright Milfoil |
| MH | Marsilea drummondii | Common Nardoo |
| MH | Ludwigia peploides ssp. montevidensis | Clove-strip |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| SH | Lobelia concolor | Poison Pratia |
| SH | Persicaria prostrata | Prostrate Knotweed |
| SH | Callitriche sonderi | Matted Water-starwort |
| MTG | Triglochin procerum s.l. | Water-ribbons |
| MTG | Lachnagrostis filiformis | Common Blown Grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Eleocharis pusilla | Small Spike-sedge |

##### Recruitment:

Episodic/Flood – desirable period is every five years

##### Organic Litter:

20% Cover

##### Logs:

5 m/0.1 ha.(where trees are overhanging the wetland)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH  MNG | Aster subulatus  Paspalum distichum | Aster-weed  Water Couch | high  high | low  high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 819: Spike-sedge Wetland – Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 820: Sub-saline Depression Shrubland

##### Description:

A low open shrubland/herbland dominated by chenopods and succulents and occurring on the highest terraces of the former

(i.e. pre-1750) Murray River floodplain in far North-West Victoria. It occupies semi-saline treeless pans in low-lying areas within Riverine Chenopod Woodland on very heavy and mildly saline clay soils.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Small Shrub | 4 | 25% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Medium Herb | 6 | 25% | MH |
| Small or Prostrate Herb | 4 | 20% | SH |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  SS | **Species typical of at least part of EVC range**  Malacocera tricornis | **Common Name**  Goat Head |
| SS | Cressa cretica | Rosinweed |
| SS | Sclerolaena tricuspis | Three-spined Bassia |
| SS | Atriplex lindleyi | Flat-top Saltbush |
| PS | Sclerochlamys brachyptera | Short-wing Saltbush |
| MH | Brachyscome lineariloba | Hard-head Daisy |
| MH | Senecio glossanthus | Slender Groundsel |
| MH | Goodenia pinnatifida | Cut-leaf Goodenia |
| MH | Plantago cunninghmaii | Clay Plantain |
| SH | Disphyma crassifolium ssp. clavellatum | Rounded Noon-flower |
| SH | Maireana pentagona | Hairy Bluebush |

##### Recruitment:

Continuous

##### Organic Litter:

5% cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH  LH MH MH MH MH SH SH MTG MNG MNG SNG SNG SNG | Sonchus oleraceus  Brassica tournefortii Reichardia tingitana Hypochoeris glabra Carrichtera annua Spergularia diandra Medicago minima Spergularia rubra s.l.  Critesion murinum subsp. glaucum Bromus rubens  Vulpia bromoides Schismus barbata  Lamarckia aurea  Parapholis incurva | Common Sow-thistle  Mediterranean Turnip False Sow-thistle Smooth Cat's-ear Ward’s Weed  Lesser Sand-spurrey Little Medic  Red Sand-spurrey Blue Barley-grass Red Brome Squirrel-tail Fescue Arabian Grass Golden-top  Coast Barb-grass | high  high high high high high high high high high high high high high | low  high low low high low high low high high high high low high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 820: Sub-saline Depression Shrubland - Murray Scroll Belt bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 823: Lignum Swampy Woodland

##### Description:

Understorey dominated by Lignum, typically of robust character and relatively dense (at least in patches), in association with a Eucalypt and/or Acacia woodland to 15 m tall. The ground layer includes a component of obligate wetland flora that is able to persist even if dormant over dry periods.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus largiflorens  Eucalyptus camaldulensis | 50 cm  70 cm | 15/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus largiflorens  Eucalyptus camaldulensis Acacia stenophylla | Black Box  River Red Gum River Coobah |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 2 | 30% | MS |
| Small Shrub | 1 | 5% | SS |
| Large Herb | 2 | 1% | LH |
| Medium Herb\* | 8 | 10% | MH |
| Small or Prostrate Herb\* | 5 | 10% | SH |
| Medium to Small Tufted Graminoid\* | 2 | 5% | MTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Tiny Non-tufted Graminoid\* | 3 | 15% | MNG |
| Soil Crust | na | 10% | S/C |

* + Largely seasonal life form

##### Total understorey projective foliage cover 70%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Muehlenbeckia florulenta | **Common Name**  Tangled Lignum |
| MS | Chenopodium nitrariaceum | Nitre Goosefoot |
| SS | Atriplex lindleyi | Flat-top Saltbush |
| SS | Sclerolaena muricata | Five-spined Bassia |
| LH | Rumex spp. | Dock |
| MH | Marsilea drummondii | Common Nardoo |
| MH | Brachyscome ciliaris | Variable Daisy |
| MH | Euchiton sphaericus | Annual Cudweed |
| MH | Ranunculus spp. | Buttercup |
| MTG | Setaria jubiflora | Warrego Summer-grass |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |
| MTG | Sporobolus mitchellii | Short Rat-tail Grass |
| MTG | Eragrostis setifolia | Bristly Love-grass |
| LNG | Eragrostis australasica | Cane Grass |
| MNG | Eragrostis infecunda | Barren Cane grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Eleocharis pusilla | Small Spike-sedge |
| SC | Asperula gemella | Twin-leaf Bedstraw |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 823: Lignum Swampy Woodland - Murray Scroll Belt bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  5% cover  **Logs:**  10m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  SH Phyla canescens Lippia high high  Published by the Victorian Government Department of Sustainability and Environment May 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Murray Scroll Belt bioregion

EVC 824: Woorinen Mallee

##### Description:

Widespread mallee woodland to 12 m tall, associated with the east-west orientated calcareous dunefields of the Woorinen Formation with a low, open chenopod dominated shrub understorey. A diverse array of sub-shrubs, herbs and grasses are also present. Typically occurs on fine textured red-brown sandy loam and clay loam soils.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  15 cm | **#/ha**  30/ha |

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover**  25% | **Character Species**  Eucalyptus oleosa ssp. oleosa | **Common Name**  Oil Mallee |
|  | Eucalyptus dumosa | Dumosa Mallee |
|  | Eucalyptus gracilis | Yorrell |
|  | Eucalyptus calycogona | Red Mallee |
|  | Eucalyptus socialis | Grey Mallee |
|  | Eucalyptus cyanophylla | Blue-leaved Mallee |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** Medium Shrub | **#Spp**  6 | **%Cover**  10% | **LF code**  MS |
| Small Shrub | 6 | 20% | SS |
| Medium Herb\* | 6 | 10% | MH |
| Small or Prostrate Herb | 7 | 10% | SH |
| Medium to Small Tufted Graminoid | 1 | 1% | MTG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 15% | S/C |

* + Largely seasonal life form

##### Total understorey projective foliage cover 60%

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Santalum acuminatum | **Common Name**  Sweet Quandong |
| MS | Exocarpos aphyllus | Leafless Ballart |
| MS | Acacia oswaldii | Umbrella Wattle |
| MS | Eremophila glabra | Common Emu-bush |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| SS | Chenopodium curvispicatum | Cottony Goosefoot |
| SS | Olearia muelleri | Mueller Daisy-bush |
| SS | Maireana pentatropis | Erect Bluebush |
| MH | Zygophyllum apiculatum | Pointed Twin-leaf |
| MH | Stenopetalum lineare | Narrow Thread-petal |
| MH | Eriochiton sclerolaenoides | Woolly-fruit Bluebush |
| MH | Brachyscome ciliaris | Variable Daisy |
| SH | Calandrinia eremaea | Small Purslane |
| SH | Ptilotus seminudus | Rabbit Tails |
| SH | Rhodanthe pygmaea | Pygmy Sunray |
| SH | Isoetopsis graminifolia | Grass Cushion |
| MTG | Austrostipa elegantissima | Feather Spear-grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 824: Woorinen Mallee - Murray Scroll Belt bioregion | |
|  | **Recruitment:**  Continuous (excluding overstorey)  **Organic Litter:**  20% cover  **Logs:**  20m/0.1 ha. (note: large log class does not apply)  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea subsp. europaea Olive high high  MS Lycium ferocissimum Boxthorn high high  LH Opuntia spp. Prickly Pear high high  LH Critesion spp. Barley-grass high low  LH Gazania linearis Gazania high high LH Psilocaulon granulicaule Noon-flower high high  LH Sisymbrium erysimoides Smooth Mustard high high LH Sisymbrium irio London Mustard high high  MH Brassica tournefortii Mediterranean Turnip high high MH Carpobrotus aequilaterus Angled Pigface high high MH Medicago spp. Medic high low  MH Marrubium vulgare Horehound high high  MH Oxalis pes-caprae Soursob high high MH Trifolium arvense var. arvense Hare's-foot Clover high low  MH Mesembryanthemum nodiflora Ice-plant high high  MH Carrichtera annua Ward’s Weed high high MH Silene apetala var. apetala Sand Catchfly high low  MH Silene gallica French Catchfly high low  MH Silene nocturna Mediterranean Catchfly high low  MH Limonium sinuatum Notch-leaf Sea-lavender high high  MH Limonium lobatum Winged Sea-lavender high high SH Mesembryanthemum crystallinum Common Ice-plant high high  MNG Schismus barbatus Arabian Grass high low  MTG Asphodelus fistulosus Onion Weed high high  MTG Lolium rigidum Wimmera Rye-grass high low  MNG Bromus spp. Brome high high  MNG Vulpia myuros Rat's-tail Fescue high low SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment May 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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