

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

Victorian Riverina bioregion

EVC 3: Damp Sands Herb-rich Woodland

Description:

A low, grassy or bracken-dominated open woodland to 15 m tall with a large shrub layer and ground layer rich in herbs, grasses, and orchids. Occurs on sandy lunettes with underlying water seepage on moderately fertile, deep sandy or loamy topsoils.

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| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus melliodora | Yellow Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 3 | 10% | LTG |
| Medium to Small Tufted Graminoid | 8 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 1 | 5% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

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| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| T | Acacia pycnantha | Golden Wattle |
| MS | Acacia montana | Mallee Wattle |
| SS | Pimelea humilis | Common Rice-flower |
| LH | Wahlenbergia spp. | Bluebell |
| MH | Sida corrugata | Variable Sida |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| MH | Acaena echinata | Sheep's Burr |
| SH | Dichondra repens | Kidney-weed |
| LTG | Austrostipa mollis | Supple Spear-grass |
| LTG | Juncus pallidus | Pale Rush |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Dianella longifolia | Pale Flax-lily |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Austrodanthonia racemosa var. racemosa | Stiped Wallaby-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Pteridium esculentum | Austral Bracken |
| SC | Convolvulus erubescens spp. agg. | Pink Bindweed |

Ecological Vegetation Class bioregion benchmark

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| EVC 3: Damp Sands Herb-rich Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Logs:**  10 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum African Box-thorn low high  LH Cirsium vulgare Spear Thistle high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Plantago lanceolata Ribwort high low  MH Hypochoeris radicata Cat's Ear high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Romulea rosea Onion Grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low  Published by the Victorian Government Department of Sustainability and Environment December 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**

Victorian Riverina bioregion

EVC 18: Riparian Forest

Description:

A tall forest to 30 m tall along river banks and associated alluvial terraces with occasional occurrences in the heads of gullies leading into creeks and rivers. Soils are fertile alluvium, regularly inundated and permanently moist. Dominated by tall eucalypts, but also has an open to sparse secondary tree layer of wattles and scattered dense patches of shrubs, ferns, grasses and herbs.

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| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus radiata ssp. radiata  Eucalyptus viminalis  Eucalyptus globulus ssp. bicostata | Narrow-leaf Peppermint  Manna Gum Eurabbie |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 3 | 15% | T |
| Medium Shrub | 5 | 20% | MS |
| Small Shrub | 1 | 1% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 4 | 15% | LTG |
| Large Non-tufted Graminoid | 2 | 5% | LNG |
| Medium to Small Tufted Graminoid | 4 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 4 | 15% | GF |
| Tree Fern | 1 | 5% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 18: Riparian Forest - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Pomaderris aspera Hazel Pomaderris  T Acacia melanoxylon Blackwood  MS Prostanthera lasianthos Victorian Christmas-bush  MS Olearia lirata Snowy Daisy-bush  MS Coprosma quadrifida Prickly Currant-bush  MS Cassinia aculeata Common Cassinia  PS Acrotriche prostrata Trailing Ground-berry  LH Senecio minimus Shrubby Fireweed  LH Senecio linearifolius Fireweed Groundsel  MH Acaena novae-zelandiae Bidgee-widgee  MH Stellaria pungens Prickly Starwort  MH Geranium potentilloides Cinquefoil Cranesbill  SH Dichondra repens Kidney-weed  SH Lobelia pedunculata s.l. Matted Pratia  SH Leptinella filicula Mountain Cotula  LTG Lomandra longifolia Spiny-headed Mat-rush  LTG Carex appressa Tall Sedge  LTG Lepidosperma elatius Tall Sword-sedge  LTG Poa labillardierei Common Tussock-grass  LNG Tetrarrhena juncea Forest Wire-grass  MTG Dianella tasmanica Tasman Flax-lily  MTG Isolepis inundata Swamp Club-sedge  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Poa tenera Slender Tussock-grass  GF Polystichum proliferum Mother Shield-fern  GF Blechnum nudum Fishbone Water-fern  GF Pteridium esculentum Austral Bracken  GF Adiantum aethiopicum Common Maidenhair  SC Clematis aristata Mountain Clematis  **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  30 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Rubus fruticosus spp. agg. Blackberry high high LH Sonchus asper s.l. Rough Sow-thistle high low  LH Cirsium vulgare Spear Thistle high high  MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high high MH Centaurium erythraea Common Centaury low low  LNG Holcus lanatus Yorkshire Fog 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

Victorian Riverina bioregion

EVC 19: Riparian Shrubland

Description:

Medium to tall shrubland to 8 m tall occurring on rocky substrates of major streams and banks and channels of rocky creeks and along perennial streams in gorge tracts. Able to withstand frequent flooding or regenerate rapidly after such disturbance and often forming dense thickets along the stream's edge during long periods without flooding. Emergent trees may be irregularly scattered throughout but tend to be restricted to the banks of the rivers and creeks. Sedges and rushes common to riparian environments dominate the understorey as well as an array of herbs and grasses including many ephemeral species which survive on the bare sands or in rock crevice.

Canopy Cover:

|  |  |  |
| --- | --- | --- |
| %cover | Character Species | Common Name |
| 20% | Acacia dealbata | Silver Wattle |

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| --- | --- | --- | --- |
| Understorey: Life form | #Spp | %Cover | LF code |
| Medium Shrub | 4 | 5% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 5 | 5% | LH |
| Medium Herb | 8 | 10% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 3 | 5% | LTG |
| Large Non-tufted Graminoid | 2 | 1% | LNG |
| Medium to Small Tufted Graminoid | 8 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 4 | 5% | MNG |
| Ground Fern | 1 | 1% | GF |
| Bryophytes/Lichens | na | 20% | BL |
| Total understorey projective foliage cover |  | 70% |  |

|  |  |  |  |
| --- | --- | --- | --- |
| LF Code  MS |  | Species typical of at least part of EVC range  Bossiaea foliosa | Common Name  Leafy Bossiaea |
| MS |  | Callistemon sieberi | River Bottlebrush |
| MS |  | Acacia verniciflua | Varnish Wattle |
| SS |  | Rubus parvifolius | Small-leaf Bramble |
| LH |  | Senecio quadridentatus | Cotton Fireweed |
| LH |  | Persicaria hydropiper | Water Pepper |
| LH |  | Persicaria decipiens | Slender Knotweed |
| MH |  | Alternanthera denticulata s.l. | Lesser Joyweed |
| MH |  | Centipeda cunninghamii | Common Sneezeweed |
| MH |  | Euchiton involucratus s.l. | Common Cudweed |
| SH |  | Hypericum japonicum | Matted St John's Wort |
| SH |  | Crassula helmsii | Swamp Crassula |
| LTG |  | Juncus usitatus | Billabong Rush |
| LTG |  | Carex polyantha | River Sedge |
| LTG |  | Carex appressa | Tall Sedge |
| LNG |  | Phragmites australis | Common Reed |
| MTG |  | Carex gaudichaudiana | Fen Sedge |
| MTG |  | Juncus pauciflorus | Loose-flower Rush |
| MTG | v | Lipocarpha microcephala | Button Rush |
| MTG |  | Poa labillardierei | Common Tussock-grass |
| MNG |  | Isachne globosa | Swamp Millet |
| MNG |  | Microlaena stipoides var. stipoides | Weeping Grass |
| MNG |  | Cynodon dactylon | Couch |
| GF |  | Pteridium esculentum | Austral Bracken |
| EP |  | Amyema quandang var. quandang | Grey Mistletoe |

Ecological Vegetation Class bioregion benchmark

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| EVC 19: Riparian Shrubland – Victorian Riverina bioregion | |
|  | Recruitment:  Continuous  Organic Litter:  10% Cover  Logs:  10 m/0.1 ha (note: large log class does not apply)  Weediness:  LF Code Typical Weed Species Common Name Invasive Impact  MS Ulex europaeus Gorse low high  MS Rubus fruticosus spp. agg. Blackberry high high  LH Hypericum perforatum St John's Wort high high LH Verbena bonariensis s.l. Purple-top Verbena high high  LH Carduus pycnocephalus Slender Thistle high high  LH Verbascum spp. Mullein high high  LH Opuntia spp. Prickly Pear high high  MH Acetosella vulgaris Sheep Sorrel high low  MH Galium divaricatum Slender Bedstraw high low  MH Hypochoeris glabra Smooth Cat's-ear high low MH Hypochoeris radicata Cat's Ear high low  MH Stellaria media Chickweed high low  MH Ranunculus repens Creeping Buttercup high high  MH Myosotis discolor Yellow-and-blue Forget-me-not high high  MH Anagallis arvensis Pimpernel high low  MH Trifolium spp. Clover high low  MH Centaurium spp. Centaury low low  SH Ludwigia palustris Marsh Ludwigia high high  LNG Holcus lanatus Yorkshire Fog high high  MTG Briza maxima Large Quaking-grass high low MTG Agrostis capillaris s.l. Brown-top Bent high high  MTG Bromus diandrus Great Brome high low  MTG Pentaschistis airoides ssp. airoides False Hair-grass high low MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Cyperus eragrostis Drain Flat-sedge high high  MNG Paspalum distichum Water Couch high high  MNG Bromus rubens Red Brome high low  MNG Aira elegantissima Delicate Hair-grass high low SC Asparagus asparagoides Bridal Creeper high high  Published by the Victorian Government Department of Sustainability and Environment November 2007  © The State of Victoria Department of Sustainability and Environment 2007  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**

Victorian Riverina bioregion

EVC 20: Heathy Dry Forest

Description:

Open eucalypt forest to 20 m tall. Grows on shallow, rocky skeletal soils on a variety of geologies and on a range of landforms from gently undulating hills to exposed aspects on ridge tops and steep slopes at a range of elevations. The understorey is dominated by a low, sparse to dense layer of ericoid-leaved shrubs including heaths and peas. Graminoids and grasses are frequently present in the ground layer, but do not provide much cover.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  60 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus macrorhyncha  Eucalyptus polyanthemos Eucalyptus goniocalyx s.s. | Red Stringybark  Red Box Bundy |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 6 | 20% | MS |
| Small Shrub | 6 | 20% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 7 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 2 | 15% | LTG |
| Medium to Small Tufted Graminoid | 6 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

Ecological Vegetation Class bioregion benchmark

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| --- | --- |
| EVC 20: Heathy Dry Forest - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Exocarpos cupressiformis Cherry Ballart  MS Grevillea alpina Cat's Claw Grevillea  MS Brachyloma daphnoides Daphne Heath  MS Persoonia rigida Hairy Geebung  SS Hibbertia obtusifolia Grey Guinea-flower  SS Melichrus urceolatus Urn Heath  SS Hovea heterophylla Common Hovea  SS Dillwynia phylicoides Small-leaf Parrot-pea  PS Platylobium formosum Handsome Flat-pea  PS Acrotriche serrulata Honey-pots  LH Senecio tenuiflorus Slender Fireweed  LH Xerochrysum viscosum Shiny Everlasting  LH Wahlenbergia stricta Tall Bluebell  MH Gonocarpus tetragynus Common Raspwort  MH Helichrysum scorpioides Button Everlasting  MH Microseris scapigera spp. agg. Yam Daisy  SH Hydrocotyle laxiflora Stinking Pennywort  LTG Joycea pallida Silvertop Wallaby-grass  MTG Dianella revoluta s.l. Black-anther Flax-lily  MTG Lomandra filiformis Wattle Mat-rush  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MTG Poa sieberiana Grey Tussock-grass  MNG Microlaena stipoides var. stipoides Weeping Grass  SC Thysanotus patersonii Twining Fringe-lily  SC Hardenbergia violacea Purple Coral-pea  **Recruitment:**  Episodic/Fire. Desirable period between disturbances is 20 years.  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Anagallis arvensis Pimpernel high low  MTG Briza maxima Large Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MNG Aira elegantissima Delicate Hair-grass high low  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**

Victorian Riverina bioregion

EVC 21: Shrubby Dry Forest

Description:

Occurs on a range of geologies on exposed aspects such as ridge-lines and medium to steep upper slopes, often in high rainfall areas and on shallow infertile soils. The overstorey is an open forest to 25 m tall characterised by the diversity and variability of the eucalypts. The understorey often lacks a secondary tree layer but contains a well-developed medium to low shrub layer. The ground layer is often very sparse with tussock-forming graminoids being the dominant life form.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus dives  Eucalyptus mannifera ssp. mannifera | Broad-leaved Peppermint  Brittle Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 8 | 15% | MS |
| Small Shrub | 3 | 5% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 7 | 5% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Large Non-tufted Graminoid | 1 | 1% | LNG |
| Medium to Small Tufted Graminoid | 6 | 10% | MTG |
| Ground Fern | 2 | 5% | GF |
| Scrambler or Climber | 2 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **65%** |  |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 21: Shrubby Dry Forest - Victoria Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Exocarpos cupressiformis Cherry Ballart  MS Cassinia aculeata Common Cassinia  MS Daviesia latifolia Hop Bitter-pea  MS Daviesia ulicifolia Gorse Bitter-pea  MS Pultenaea juniperina s.l. Prickly Bush-pea  SS Hibbertia obtusifolia Grey Guinea-flower  SS Tetratheca ciliata Pink-bells  SS Hovea heterophylla Common Hovea  SS Olearia erubescens Moth Daisy-bush  PS Persoonia chamaepeuce Dwarf Geebung  PS Acrotriche serrulata Honey-pots  LH Senecio tenuiflorus Slender Fireweed  LH Senecio linearifolius Fireweed Groundsel  MH Gonocarpus tetragynus Common Raspwort  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Stellaria pungens Prickly Starwort  MH Asperula scoparia Prickly Woodruff  SH Hydrocotyle laxiflora Stinking Pennywort  LTG Lomandra longifolia Spiny-headed Mat-rush  MTG Joycea pallida Silvertop Wallaby-grass  MTG Poa sieberiana Grey Tussock-grass  MTG Dianella tasmanica Tasman Flax-lily  MTG Dianella revoluta s.l. Black-anther Flax-lily  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Pteridium esculentum Austral Bracken  SC Hardenbergia violacea Purple Coral-pea  SC Clematis aristata Mountain Clematis  **Recruitment:**  Episodic/Fire. Desirable period between disturbances is 20 years.  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear 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**

Victorian Riverina bioregion

EVC 22: Grassy Dry Forest

Description:

Occurs on a variety of gradients and altitudes and on a range of geologies. The overstorey is dominated by a low to medium height forest of eucalypts to 20 m tall, sometimes resembling an open woodland with a secondary, smaller tree layer including a number of Acacia species. The understorey usually consists of a sparse shrub layer of medium height. Grassy Dry Forest is characterised by a ground layer dominated by a high diversity of drought-tolerant grasses and herbs, often including some fern species.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Callitris spp. | 60 cm  40 cm | 20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  30% | **Character Species**  Eucalyptus goniocalyx s.l. | **Common Name**  Bundy |
|  | Eucalyptus macrorhyncha | Red Stringybark |
|  | Eucalyptus polyanthemos | Red Box |
|  | Eucalyptus blakelyi | Blakely’s Red Gum |
|  | Callitris endlicheri | Black Cypress-pine |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 5% | T |
| Medium Shrub | 5 | 10% | MS |
| Small Shrub | 4 | 5% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 1% | LH |
| Medium Herb | 5 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 8 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 2 | 1% | GF |
| Scrambler or Climber | 1 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **80%** |  |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 22: Grassy Dry Forest - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Exocarpos cupressiformis Cherry Ballart  T Acacia implexa Lightwood  MS Acacia dealbata Silver Wattle  MS Acacia verniciflua Varnish Wattle  MS Cassinia longifolia Shiny Cassinia  MS Cassinia aculeata Common Cassinia  SS Hibbertia obtusifolia Grey Guinea-flower  SS Hovea heterophylla Common Hovea  SS Hibbertia riparia Erect Guinea-flower  PS Acrotriche serrulata Honey-pots  LH Senecio quadridentatus Cotton Fireweed  MH Gonocarpus tetragynus Common Raspwort  MH Hypericum gramineum Small St John's Wort  MH Geranium solanderi s.l. Austral Cranesbill  MH Euchiton collinus s.l. Clustered/Creeping Cudweed  SH Hydrocotyle laxiflora Stinking Pennywort  MTG Joycea pallida Silvertop Wallaby-grass  MTG Poa sieberiana Grey Tussock-grass  MTG Lomandra filiformis Wattle Mat-rush  MTG Austrostipa scabra Rough Spear-grass  MTG Dianella revoluta s.l. Black-anther Flax-lily  MTG Themeda triandra Kangaroo Grass  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Cheilanthes austrotenuifolia Green Rock-fern  SC Hardenbergia violacea Purple Coral-pea  **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Hypericum perforatum St John's Wort high high  MH Hypochoeris radicata Cat's Ear high low  MH Anagallis arvensis Pimpernel low low MH Trifolium arvense var. arvense Hare's-foot Clover high low  MH Centaurium erythraea Common Centaury high low  MH Trifolium campestre var. campestre Hop Clover high low MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Briza maxima Large Quaking-grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low MTG Anthoxanthum odoratum Sweet Vernal-grass high high  MNG Aira elegantissima Delicate Hair-grass high low  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**

Victorian Riverina bioregion

EVC 23: Herb-rich Foothill Forest

Description:

A medium to tall open forest to 30 m tall with a small tree layer over a sparse to dense shrub layer. Occurs on relatively fertile, moderately well-drained soils on an extremely wide range of geological types and in areas of moderate to high rainfall. Occupies easterly and southerly aspects mainly on lower slopes and in gullies. The understorey contains a high cover and diversity of herbs and grasses in the ground layer, which characterises this EVC.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  40% | **Character Species**  Eucalyptus dives | **Common Name**  Broad-leaved Peppermint |
|  | Eucalyptus radiata s.l. | Narrow-leaf Peppermint |
|  | Eucalyptus obliqua | Messmate Stringybark |
|  | Eucalyptus globulus ssp. bicostata | Eurabbie |
|  | Eucalyptus mannifera ssp. mannifera | Brittle Gum |
|  | Eucalyptus rubida | Candlebark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 3 | 5% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 13 | 25% | MH |
| Small or Prostrate Herb | 4 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 6 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 1 | 5% | GF |
| Scrambler or Climber | 2 | 1% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 23: Herb-rich Foothill Forest – Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Daviesia latifolia Hop Bitter-pea  MS Pimelea linifolia ssp. linifolia Slender Rice-flower  SS Hibbertia obtusifolia Grey Guinea-flower  SS Hovea heterophylla Common Hovea  SS Tetratheca ciliata Pink-bells  SS Olearia erubescens Moth Daisy-bush  PS Acrotriche serrulata Honey-pots  PS Acrotriche prostrata Trailing Ground-berry  LH Wahlenbergia stricta Tall Bluebell  LH Senecio tenuiflorus Slender Fireweed  LH Pterostylis longifolia s.l. Tall Greenhood  MH Poranthera microphylla Small Poranthera  MH Gonocarpus tetragynus Common Raspwort  MH Drosera peltata ssp. auriculata Tall Sundew  MH Stackhousia monogyna Creamy Stackhousia  SH Hydrocotyle laxiflora Stinking Pennywort  SH Dichondra repens Kidney-weed  SH Cymbonotus preissianus Austral Bear's-ear  LTG Lomandra longifolia ssp. exilis Cluster-headed Mat-rush  MTG Luzula meridionalis var. flaccida Common Woodrush  MTG Poa sieberiana var. sieberiana Grey Tussock-grass  MTG Lomandra multiflora ssp. multiflora Many-flowered Mat-rush  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Pteridium esculentum Austral Bracken  SC Glycine clandestina Twining Glycine  SC Clematis aristata Mountain Clematis  **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low MH Centaurium erythraea Common Centaury high low MH Anagallis arvensis Pimpernel high low MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low MNG Aira elegantissima Delicate Hair-grass 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**

Victorian Riverina bioregion

EVC 28: Rocky Outcrop Shrubland

Description:

Occurs in areas of low site quality on exposed rocky outcrops where rock is a dominant landform feature, soils are shallow or virtually absent and effective rainfall is low. Scattered, often stunted trees are occasionally present. A diverse shrub layer to 5 m tall characterises this EVC, including a number of rock-adapted species. The ground layer is usually sparse and species-poor except where it occurs in discrete patches and forms a mosaic with Rocky Outcrop Herbland.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 5 | 25% | MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 5 | 5% | MH |
| Small or Prostrate Herb | 1 | 1% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 4 | 10% | MTG |
| Ground Fern | 2 | 5% | GF |
| Bryophytes/Lichens | na | 20% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **75%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Character Species**  Monotoca scoparia | **Common Name**  Prickly Broom-heath |
| MS | Brachyloma daphnoides | Daphne Heath |
| SS | Hibbertia obtusifolia | Grey Guinea-flower |
| SS | Dillwynia phylicoides | Small-leaf Parrot-pea |
| SS | Rhytidosporum procumbens | White Marianth |
| SS | Acacia gunnii | Ploughshare Wattle |
| PS | Platylobium formosum | Handsome Flat-pea |
| LH | Senecio tenuiflorus | Slender Fireweed |
| LH | Derwentia perfoliata | Digger's Speedwell |
| LH | Wahlenbergia multicaulis | Branching Bluebell |
| LH | Chrysocephalum semipapposum | Clustered Everlasting |
| MH | Stellaria pungens | Prickly Starwort |
| MH | Helichrysum scorpioides | Button Everlasting |
| MH | Gonocarpus tetragynus | Common Raspwort |
| MH | Diuris sulphurea | Tiger Orchid |
| SH | Crassula sieberiana | Sieber Crassula |
| LTG | Lomandra longifolia | Spiny-headed Mat-rush |
| LTG | Austrodanthonia induta | Shiny Wallaby-grass |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Poa labillardierei | Common Tussock-grass |
| MTG | Joycea pallida | Silvertop Wallaby-grass |
| MTG | Lepidosperma laterale | Variable Sword-sedge |
| GF | Cheilanthes sieberi ssp. sieberi | Narrow Rock-fern |
| GF | Asplenium flabellifolium | Necklace Fern |

Recruitment:

Continuous

Organic Litter:

40 % cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| MH  MNG | Hypochoeris radicata  Vulpia myuros | Cat's Ear  Rat's-tail Fescue | high  high | low  low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 28: Rocky Outcrop Shrubland - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 47: Valley Grassy Forest

Description:

Valley Grassy Forest occurs on fertile well-drained colluvial or alluvial soils on gently undulating lower slopes and valley floors. The tall, open overstorey to 20 m tall may carry a variety of eucalypts, usually species which prefer more moist or more fertile conditions over a sparse shrub cover. In season, a rich array of herbs, lilies, grasses and sedges dominate the ground layer but at the drier end of the spectrum the ground layer may be sparse and slightly less diverse, but with the moisture-loving species still remaining.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  20% | **Character Species**  Eucalyptus blakelyi | **Common Name**  Blakely's Red-gum |
|  | Eucalyptus macrorhyncha | Red Stringybark |
|  | Eucalyptus melliodora | Yellow Box |
|  | Eucalyptus albens | White Box |
|  | Eucalyptus rubida | Candlebark |
|  | Eucalyptus bridgesiana s.l. | But But |
|  | Eucalyptus polyanthemos | Red Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 3 | 10% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 9 | 20% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 12 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 5% | MNG |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 47: Valley Grassy Forest - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Acacia melanoxylon Blackwood  T Exocarpos cupressiformis Cherry Ballart  MS Cassinia aculeata Dogwood  MS Dodonaea viscosa ssp. angustissima Narrow-leaf Hop-bush  MS Indigofera australis Austral Indigo  SS Hibbertia riparia Erect Guinea-flower  SS Hibbertia obtusifolia Grey Guinea-flower  SS Platylobium formosum Handsome Flat-pea  LH Senecio quadridentatus Cotton Fireweed  LH Wahlenbergia stricta Tall Bluebell  MH Gonocarpus tetragynus Common Raspwort  MH Hypericum gramineum Small St John's Wort  MH Geranium solanderi s.l. Austral Cranesbill  SH Hydrocotyle laxiflora Stinking Pennywort  SH Desmodium varians Slender Tick-trfoil  MTG Lomandra filiformis Wattle Mat-rush  MTG Dianella revoluta s.l. Black-anther Flax-lily  MTG Schoenus apogon Common Bog-sedge  MTG Arthropodium strictum s.l. Chocolate Lily  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Cheilanthes austrotenuifolia Green Rock-fern  SC Hardenbergia violacea Purple Coral-pea  SC Glycine clandestina Twining Glycine  **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Hypericum perforatum St John's Wort high high  LH Sonchus asper s.l. Rough Sow-thistle high low  LH Cirsium vulgare Spear Thistle high low  MH Hypochoeris radicata Cat's Ear high low  MH Anagallis arvensis Pimpernel high low  MH Hypochoeris glabra Smooth Cat's-ear high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Briza maxima Large Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Briza minor Lesser Quaking-grass high low MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low  MTG Phalaris aquatica Toowoomba Canary-grass 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**

Victorian Riverina bioregion

EVC 55\_61: Plains Grassy Woodland

Description:

An open, eucalypt woodland to 15 m tall. Occupies well drained, fertile soils on flat or gently undulating plains at low elevations in areas with >600 mm annual rainfall. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer characterised by summer-growing grasses.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  10 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus camaldulensis  Eucalyptus melliodora | River Red Gum  Yellow Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 2 | 1% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 12 | 45% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia pycnantha | **Common Name**  Golden Wattle |
| MS | Acacia paradoxa | Hedge Wattle |
| MS | Acacia acinacea s.l. | Gold-dust Wattle |
| MS | Bursaria spinosa | Sweet Bursaria |
| SS | Pimelea humilis | Common Rice-flower |
| PS | Astroloma humifusum | Cranberry Heath |
| PS | Bossiaea prostrata | Creeping Bossiaea |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| MH | Chrysocephalum apiculatum s.l. | Common Everlasting |
| MH | Acaena echinata | Sheep's Burr |
| MH | Eryngium ovinum | Blue Devil |
| SH | Dichondra repens | Kidney-weed |
| LTG | Austrostipa spp. | Spear-grass |
| MTG | Themeda triandra | Kangaroo Grass |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MTG | Austrodanthonia racemosa var. racemosa | Stiped Wallaby-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 55\_61: Plains Grassy Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  10 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum African Box-thorn high high LH Cirsium vulgare Spear Thistle high high LH Sonchus oleraceus Common Sow-thistle high low LH Plantago lanceolata Ribwort high low  MH Hypochoeris radicata Cat's Ear high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Romulea rosea Onion Grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low  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**

Victorian Riverina bioregion

EVC 55\_62: Riverina Plains Grassy Woodland (syn. Plains Woodland)

Description:

An open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types. Occupies fertile clays and clay loam soils on flat or gently undulating plains at low elevations in areas with <600 mm annual rainfall. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer and chenopods are often present.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Eucalyptus largiflorens Allocasuarina spp. | 70 cm  50 cm  40 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  15% | **Species typical of at least part of EVC range**  Eucalyptus microcarpa | **Common Name**  Grey Box |
|  | Eucalyptus melliodora | Yellow Box |
|  | Eucalyptus camaldulensis | River Red Gum |
|  | Eucalyptus largiflorens | Black Box |
|  | Eucalyptus leucoxylon | Yellow Gum |
|  | Allocasuarina luehmannii | Buloke |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 1 | 5% | LH |
| Medium Herb | 11 | 25% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 15 | 45% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia montana | **Common Name**  Mallee Wattle |
| MS | Acacia acinacea s.l. | Gold-dust Wattle |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Pittosporum angustifolium | Weeping Pittosporum |
| SS | Pimelea curviflora s.l. | Curved Rice-flower |
| MH | Calocephalus citreus | Lemon Beauty-heads |
| MH | Maireana enchylaenoides | Wingless Bluebush |
| MH | Einadia hastata | Saloop |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| MH | Vittadinia gracilis | Woolly New Holland Daisy |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MTG | Chloris truncata | Windmill Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 55\_62: Riverina Plains Grassy Woodland (syn. Plains Woodland) - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  10 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low MH Arctotheca calendula Cape Weed high low MH Trifolium campestre var. campestre Hop Clover high low MH Trifolium arvense var. arvense Hare's-foot Clover high low MH Trifolium subterraneum Subterranean Clover high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Trifolium dubium Suckling Clover high low  SH Trifolium glomeratum Cluster Clover high low  LTG Phalaris aquatica Toowoomba Canary-grass high high  MTG Lolium rigidum Wimmera Rye-grass high low  MNG Romulea rosea Onion Grass high low  MNG Briza minor Lesser Quaking-grass high low  MNG Briza maxima Large Quaking-grass high low  MNG Vulpia bromoides Squirrel-tail Fescue high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Juncus capitatus Capitate Rush high low  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**

Victorian Riverina bioregion

EVC 56: Floodplain Riparian Woodland

Description:

An open eucalypt woodland or open forest to 20 m tall over a medium to tall shrub layer with a ground layer consisting of amphibious and aquatic herbs and sedges. Occurs along the banks and floodplains of the larger meandering rivers and major creeks, often in conjunction with one or more floodplain wetland communities. Elevation and rainfall are relatively low and soils are fertile alluviums subject to periodic flooding and inundation.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 1 | 1% | SS |
| Medium Herb | 4 | 10% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 2 | 10% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 6 | 35% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 10% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **90%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS | Hymenanthera dentata s.l. | Tree Violet |
| MH | Sida corrugata | Variable Sida |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| MH | Persicaria decipiens | Slender Knotweed |
| SH | Chamaesyce drummondii | Flat Spurge |
| SH | Azolla filiculoides | Pacific Azolla |
| LTG | Carex appressa | Tall Sedge |
| LNG | Phragmites australis | Common Reed |
| LNG | Eleocharis sphacelata | Tall Spike-sedge |
| MTG | Poa labillardierei | Common Tussock-grass |
| MTG | Chloris truncata | Windmill Grass |
| MTG | Themeda triandra | Kangaroo Grass |
| MTG | Aristida behriana | Brush Wire-grass |
| MNG | Pseudoraphis spinescens | Spiny Mud-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 56: Floodplain Riparian Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Episodic/Flood - Desirable period between disturbances is 10 years.  **Organic Litter:**  40 % cover  **Logs:**  30 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Cirsium vulgare Spear Thistle high high  SH Trifolium glomeratum Cluster Clover high low  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**

Victorian Riverina bioregion

EVC 61: Box Ironbark Forest

Description:

Occurs on gently undulating rises, low hills and peneplains on infertile, often stony soils derived from a range of geologies. The open overstorey to 20 m tall consists of a variety of eucalypts, often including one of the Ironbark species. The mid storey often forms a dense to open small tree or shrub layer over an open ground layer ranging from a sparse to well-developed suite of herbs and grasses.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  20% | **Character Species**  Eucalyptus microcarpa | **Common Name**  Grey Box |
|  | Eucalyptus polyanthemos | Red Box |
|  | Eucalyptus leucoxylon | Yellow Gum |
|  | Eucalyptus tricarpa | Red Ironbark |
|  | Eucalyptus sideroxylon s.s. | Mugga |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 5 | 20% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 5 | 10% | MH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 5 | 15% | MTG |
| Scrambler or Climber | 1 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |
| **Total understorey projective foliage cover** |  | **75%** |  |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Daviesia ulicifolia | **Common Name**  Gorse Bitter-pea |
| MS | Cassinia arcuata | Drooping Cassinia |
| MS | Ozothamnus obcordatus | Grey Everlasting |
| MS | Brachyloma daphnoides | Daphne Heath |
| SS | Melichrus urceolatus | Urn Heath |
| SS | Pultenaea largiflorens | Twiggy Bush-pea |
| SS | Pultenaea prostrata | Silky Bush-pea |
| SS | Hovea heterophylla | Common Hovea |
| PS | Astroloma humifusum | Cranberry Heath |
| LH | Xerochrysum viscosum | Shiny Everlasting |
| LH | Wahlenbergia stricta | Tall Bluebell |
| LH | Senecio tenuiflorus | Slender Fireweed |
| MH | Gonocarpus tetragynus | Common Raspwort |
| MH | Goodenia hederacea | Ivy Goodenia |
| MH | Leptorhynchos squamatus | Scaly Buttons |
| MH | Pterostylis nana | Dwarf Greenhood |
| SH | Kennedia prostrata | Running Postman |
| MTG | Joycea pallida | Silvertop Wallaby-grass |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| GF | Cheilanthes austrotenuifolia | Green Rock-fern |
| SC | Thysanotus patersonii | Twining Fringe-lily |
| SC | Hardenbergia violacea | Purple Coral-pea |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 61: Box Ironbark Forest - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Sonchus asper s.l. Rough Sow-thistle high low  MH Hypochoeris radicata Cat's Ear high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low  MH Trifolium campestre var. campestre Hop Clover high low  MH Centaurium erythraea Common Centaury high low  LNG Avena spp. Oat high low  MTG Briza maxima Large Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Bromus diandrus Great Brome high low  MNG Aira elegantissima Delicate Hair-grass high low  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**

Victorian Riverina bioregion

EVC 66: Low Rises Woodland

Description:

Eucalypt woodland to 15 m tall on elevated plains and low rises with a diverse shrub understorey and grassy field layer. Occurs in a range of environmental settings that have resulted in well-drained surface soils mantling clay sub-soils.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina spp.  Callitris spp. | 60 cm  40 cm  40 cm | 20/ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover**  20% | **Character Species**  Eucalyptus melliodora | **Common Name**  Yellow Gum |
|  | Eucalyptus microcarpa | Grey Box |
|  | Callitris gracilis ssp. murrayensis | Slender Cypress-pine |
|  | Callitris glaucophylla | White Cypress-pine |
|  | Allocasuarina luehmannii | Buloke |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 5% | T |
| Medium Shrub | 5 | 15% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 3 | 5% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Medium to Small Tufted Graminoid | 7 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **70%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Pittosporum angustifolium | **Common Name**  Weeping Pittosporum |
| T | Myoporum platycarpum | Sugarwood |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Hakea tephrosperma | Needlewood |
| MS | Bursaria spinosa | Sweet Bursaria |
| MS | Acacia oswaldii | Umbrella Wattle |
| SS | Eutaxia microphylla | Common Eutaxia |
| SS | Olearia pimeleoides | Pimelea Daisy-bush |
| MH | Vittadinia cuneata | Fuzzy New Holland Daisy |
| SH | Maireana enchylaenoides | Wingless Bluebush |
| SH | Goodenia pinnatifida | Cut-leaf Goodenia |
| SH | Oxalis perennans | Grassland Wood-sorrel |
| SH | Sida corrugata | Variable Sida |
| MTG | Lepidosperma viscidum | Sticky Sword-sedge |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Enteropogon acicularis | Windmill Grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MNG | Austrostipa elegantissima | Feather Spear-grass |
| SC | Clematis microphylla | Small-leaved Clematis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 66: Low Rises Woodland – Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  15% cover  **Logs:**  20m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea Olive high high  MS Lycium ferocissimum Boxthorn high high  LH Centaurium tenuiflorum Slender Centaury high low  LH Gazania linearis Gazania high high  LH Opuntia robusta Wheel Cactus high high  MH Hypochoeris radicata Cat's Ear high low  MH Hypochoeris glabra Smooth Cat's-ear high low MH Trifolium campestre var. campestre Hop Clover high low  MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low MH Trifolium arvense var. arvense Hare's-foot Clover high low MH Petrorhagia velutina Velvety Pink high low  MH Oxalis pes-caprae Soursob high high  MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low  MTG Romulea rosea Onion Grass high high  MTG Vulpia bromoides Squirrel-tail Fescue high high  MTG Lolium rigidum Wimmera Rye-grass high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Ehrharta calycina Perennial Veldt Grass high high  MNG Vulpia myuros f. myuros Rat's-tail Fescue high high  MNG Juncus capitatus Capitate Rush high low  MNG Bromus rubens Red Brome high high  TTG Poa bulbosa Bulbous Meadow-grass high high  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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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 67: Alluvial Terraces Herb-rich Woodland

Description:

Open woodland to 15 m tall on broad alluvial plains and along ephemeral drainage lines. Soils are generally poorly drained duplex soils with sandy loam overlying a heavier clay subsoil. Understorey consists of few, if any shrubs with the striking feature of this EVC being the high species-richness of the ground-layer and the low biomass of this cover, particularly in summer.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  10 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  15% | **Character Species**  Eucalyptus melliodora | **Common Name**  Yellow Box |
|  | Eucalyptus camaldulensis | River Red-gum |
|  | Eucalyptus microcarpa | Grey Box |
|  | Eucalyptus albens | White Box |
|  | Eucalyptus goniocalyx s.s. | Bundy |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 5 | 5% | MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb\* | 3 | 5% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 15 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

\* Largely seasonal life form

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS | Acacia verniciflua | Varnish Wattle |
| MS | Acacia paradoxa | Hedge Wattle |
| MS | Bursaria spinosa ssp. spinosa | Sweet Bursaria |
| SS | Pimelea humilis | Common Rice-flower |
| SS | Pultenaea humilis | Dwarf Bush-pea |
| LH | Senecio tenuiflorus | Slender Fireweed |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Gonocarpus tetragynus | Common Raspwort |
| MH | Lagenophora huegelii | Coarse Bottle-daisy |
| MH | Wurmbea dioica | Common Early Nancy |
| SH | Solenogyne dominii | Smooth Solenogyne |
| SH | Hydrocotyle laxiflora | Stinking Pennywort |
| LTG | Juncus flavidus | Gold Rush |
| MTG | Juncus subsecundus | Finger Rush |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Schoenus apogon | Common Bog-sedge |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 67: Alluvial Terraces Herb-rich Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low MTG Briza maxima Large Quaking-grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low MNG Aira elegantissima Delicate Hair-grass high low  Und Trifolium spp. Clover high low  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**

Victorian Riverina bioregion

EVC 68: Creekline Grassy Woodland

Description:

Eucalypt-dominated woodland to 15 m tall with occasional scattered shrub layer over a mostly grassy/sedgy to herbaceous ground-layer. Occurs on low-gradient ephemeral to intermittent drainage lines, typically on fertile colluvial/alluvial soils, on a wide range of suitably fertile geological substrates. These minor drainage lines can include a range of graminoid and herbaceous species tolerant of waterlogged soils, and are presumed to have sometimes resembled a linear wetland or system of interconnected small ponds.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus camaldulensis | River Red-gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 4 | 10% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 9 | 15% | MH |
| Small Herb\* | 3 | 5% | SH |
| Large Tufted Graminoid | 2 | 10% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 16 | 35% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| T | Acacia melanoxylon | Blackwood |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Melaleuca parvistaminea | Rough-barked Honey-myrtle |
| MS | Acacia retinodes var. retinodes | Wilrilda |
| SS | Pimelea humilis | Common Rice-flower |
| PS | Astroloma humifusum | Cranberry Heath |
| LH | Senecio tenuiflorus | Slender Fireweed |
| LH | Senecio quadridentatus | Cottony Fireweed |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| MH | Hypericum gramineum | Small St John's Wort |
| SH | Dichondra repens | Kidneyweed |
| LTG | Carex appressa | Tall Sedge |
| LNG | Phragmites australis | Common Reed |
| MTG | Poa labillardierei | Common Tussock-grass |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Juncus spp. | Rush |
| MTG | Cyperus spp. | Flat-sedge |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 68: Creekline Grassy Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Logs:**  30 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Cirsium vulgare Spear Thistle high high  LH Sonchus oleraceus Common Sow-thistle high low  MH Hypochoeris radicata Cat's Ear high low  MH Anagallis arvensis Pimpernel high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Galium murale Small Goosegrass high low  MH Oxalis pes-caprae Soursob high high  LTG Juncus acutus Spiny Rush high high  LTG Phalaris aquatica Toowoomba Canary-grass high high  MTG Briza maxima Large Quaking-grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Romulea rosea Onion Grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Vulpia muralis Wall Fescue high low  MNG Bromus madritensis Madrid Brome high low  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**

Victorian Riverina bioregion

EVC 72: Granitic Hills Woodland

Description:

Mainly restricted to granite rocky outcrops and structurally consists of a low woodland to 10 m high with the dominant trees often being stunted.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Callitris spp. | 50 cm  30 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  15% | **Character Species**  Eucalyptus blakelyi | **Common Name**  Blakely's Red-gum |
|  | Eucalyptus macrorhyncha | Red Stringybark |
|  | Callitris endlicheri | Black Cypress-pine |
|  | Callitris glaucophylla | White Cypress-pine |
|  | Eucalyptus goniocalyx s.l. | Bundy |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Medium Shrub | 7 | 20% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 4 | 5% | LH |
| Medium Herb | 11 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Medium to Small Tufted Graminoid | 6 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 1% | MNG |
| Ground Fern | 2 | 1% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **65%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Calytrix tetragona | **Common Name**  Common Fringe-myrtle |
| MS | Persoonia rigida | Hairy Geebung |
| MS | Brachyloma daphnoides | Daphne Heath |
| MS | Acacia verniciflua | Varnish Wattle |
| SS | Hibbertia obtusifolia | Grey Guinea-flower |
| SS | Pultenaea procumbens | Heathy Bush-pea |
| PS | Astroloma humifusum | Cranberry Heath |
| LH | Stypandra glauca | Nodding Blue-lily |
| LH | Senecio tenuiflorus | Slender Fireweed |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Gonocarpus tetragynus | Common Raspwort |
| MH | Gonocarpus elatus | Tall Raspwort |
| MH | Geranium solanderi s.l. | Austral Cranesbill |
| SH | Hydrocotyle laxiflora | Stinking Pennywort |
| MTG | Lepidosperma laterale | Variable Sword-sedge |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Cheilanthes austrotenuifolia | Green Rock-fern |
| SC | Thysanotus patersonii | Twining Fringe-lily |
| SC | Glycine clandestina | Twining Glycine |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 72: Granitic Hills Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low MH Hypochoeris glabra Smooth Cat's-ear high low MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low MH Galium murale Small Goosegrass high low MH Galium divaricatum Slender Bedstraw high low MH Petrorhagia velutina Velvety Pink high low  MH Centaurium spp. Centaury high low MTG Vulpia bromoides Squirrel-tail Fescue high low MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low MNG Aira elegantissima Delicate Hair-grass high low  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

Victorian Riverina bioregion

EVC 80: Spring Soak Woodland

Description:

Woodland to 10 m tall with an understorey dominated by medium and small herbs and occasional shrubs. Generally occurring on granitic-outwash soils and dependent on the continual availability of a reliable water supply.

|  |  |  |
| --- | --- | --- |
| Large trees: |  | |
| Species  Eucalyptus spp. | DBH(cm)  50 cm | #/ha  5 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| %cover | Character Species | Common Name |
| 10% | Eucalyptus blakelyi | Blakely’s Red-gum |
|  | Eucalyptus bridgesiana s.s. | But But |

|  |  |  |  |
| --- | --- | --- | --- |
| Understorey: Life form | #Spp | %Cover | LF code |
| Immature Canopy Tree |  | 5% | IT |
| Medium Shrub | 2 | 5% | MS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb | 3 | 10% | SH |
| Large Tufted Graminoid | 2 | 10% | LTG |
| Large Non-tufted Graminoid | 3 | 5% | LNG |
| Medium to Small Tufted Graminoid | 9 | 35% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 5% | MNG |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |
| --- | --- | --- |
| LF Code  MS | Species typical of at least part of EVC range  Acacia dealbata | Common Name  Silver Wattle |
| MS | Mirbelia oxylobioides | Mountain Mirbelia |
| MS | Leptospermum continentale | Prickly Tea-tree |
| LH | Senecio minimus | Shrubby Fireweed |
| MH | Ranunculus sessiliflorus var. sessiliflorus | Annual Buttercup |
| SH | Hydrocotyle hirta | Hairy Pennywort |
| SH | Hypericum japonicum | Matted St John's Wort |
| SH | Gonocarpus micranthus ssp. micranthus | Creeping Raspwort |
| LTG | Juncus sarophorus | Broom Rush |
| LTG | Carex appressa | Tall Sedge |
| LNG | Baumea rubiginosa s.s. | Soft Twig-sedge |
| LNG | Phragmites australis | Common Reed |
| MTG | Juncus fockei | Slender Joint-leaf Rush |
| MTG | Poa labillardierei var. labillardierei | Common Tussock-grass |
| MTG | Juncus holoschoenus | Joint-leaf Rush |
| MTG | Luzula meridionalis var. flaccida | Common Woodrush |
| MNG | Eleocharis gracilis | Slender Spike-sedge |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 80: Spring Soak Woodland – Victorian Riverina bioregion | |
|  | Recruitment:  Continuous  Organic Litter:  20 % cover  Logs:  5 m/0.1 ha.  Weediness:  LF Code Typical Weed Species Common Name Invasive Impact  LH Sonchus asper s.l. Rough Sow-thistle high low LH Hypericum perforatum St John's Wort high high  MH Hypochoeris radicata Cat's Ear high low  MH Anagallis arvensis Pimpernel high low  MH Centaurium spp. Centaury high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Briza maxima Large Quaking-grass high low  MTG Briza minor Lesser Quaking-grass high low  TTG Cyperus tenellus Tiny Flat-sedge high low  Published by the Victorian Government Department of Sustainability and Environment November 2007  © The State of Victoria Department of Sustainability and Environment 2007  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

Victorian Riverina bioregion

EVC 82: Riverine Escarpment Scrub

Description:

Shrubland to 10 m tall with occasional emergent eucalypts. Occurs on shallow colluvial soils along rocky cliffs and slopes associated with rivers and creeks and may extend onto alluvial terraces. Characterised by a dense medium to tall shrub layer over a ground layer which can range from low to high diversity and consist of a variety of graminoids and herbs. Ferns can often be a major component of the ground stratum.

Canopy Cover:

|  |  |  |
| --- | --- | --- |
| %cover | Character Species | Common Name |
| 30% | Acacia melanoxylon  Pomaderris aspera Acacia dealbata | Blackwood  Hazel Pomaderris Silver Wattle |

|  |  |  |  |
| --- | --- | --- | --- |
| Understorey: Life form | #Spp | %Cover | LF code |
| Immature Canopy Shrub |  | 5% | IT |
| Medium Shrub | 8 | 30% | MS |
| Small Shrub | 2 | 1% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 12 | 20% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 4 | 15% | LTG |
| Medium to Small Tufted Graminoid | 3 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 3 | 10% | GF |
| Scrambler or Climber | 1 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |

|  |  |  |
| --- | --- | --- |
| LF Code | Species typical of at least part of EVC range | Common Name |
| MS | Coprosma quadrifida | Prickly Currant-bush |
| MS | Lomatia myricoides | River Lomatia |
| MS | Leptospermum brevipes | Slender Tea-tree |
| MS | Kunzea ericoides | Burgan |
| SS | Leucopogon hookeri | Mountain Beard-heath |
| SS | Platylobium formosum | Handsome Flat-pea |
| PS | Acrotriche serrulata | Honey-pots |
| LH | Epilobium billardierianum ssp. hydrophilum | Robust Willow-herb |
| LH | Senecio tenuiflorus | Slender Fireweed |
| MH | Ajuga australis | Austral Bugle |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| MH | Lagenophora stipitata | Common Bottle-daisy |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| SH | Dichondra repens | Kidney-weed |
| SH | Hydrocotyle laxiflora | Stinking Pennywort |
| LTG | Cyperus lucidus | Leafy Flat-sedge |
| LTG | Carex appressa | Tall Sedge |
| LTG | Lomandra longifolia | Spiny-headed Mat-rush |
| LTG | Poa labillardierei var. labillardierei | Common Tussock-grass |
| MTG | Poa sieberiana var. sieberiana | Grey Tussock-grass |
| MTG | Dianella tasmanica | Tasman Flax-lily |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Polystichum proliferum | Mother Shield-fern |
| GF | Adiantum aethiopicum | Common Maidenhair |
| GF | Blechnum nudum | Fishbone Water-fern |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 82: Riverine Escarpment Scrub - Victorian Riverina bioregion | |
|  | Recruitment:  Continuous  Organic Litter:  40 % cover  Logs:  5 m/0.1 ha. (note: large log class does not apply)  Weediness:  LF Code Typical Weed Species Common Name Invasive Impact  MS Rosa rubiginosa Sweet Briar high high  MS Rubus sp. aff. armeniacus Blackberry high high  MS Rubus fruticosus spp. agg. Blackberry high high  MH Hypochoeris radicata Cat's Ear high low MH Centaurium erythraea Common Centaury high low MH Prunella vulgaris Self-heal high low  LNG Holcus lanatus Yorkshire Fog high high  Published by the Victorian Government Department of Sustainability and Environment November 2007  © The State of Victoria Department of Sustainability and Environment 2007  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**

Victorian Riverina bioregion

EVC 93: Sandstone Ridge Shrubland (syn. Broombush Mallee)

Description:

Low open mallee to 3 m tall typically with a tall shrubby understorey, or shrubland with scattered emergent mallees. A good field character for this EVC is the dominance or co-dominance of the tall shrub Melaleuca uncinata in shrubland or as an understorey shrub in Mallee vegetation. Confined to the crests of outcropping Parilla sandstone ridges and also where these ridges are at least partially obscured by a shallow mantle of Lowan sand.

+ mallee only component (ignore when assessing shrubland areas and standardise final score as appropriate)

Tree Canopy Cover+:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus viridis  Eucalyptus behriana | Green Mallee  Bull Mallee |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 9 | 30% | MS |
| Small Shrub | 5 | 10% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 6 | 15% | MH |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Bryophytes/Lichens | na | 20% | BL |
| Soil Crust | na | 20% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Melaleuca uncinata | **Common Name**  Broombush |
| MS | Ozothamnus obcordatus | Grey Everlasting |
| MS | Acacia acinacea s.l. | Gold-dust Wattle |
| MS | Cassinia arcuata | Drooping Cassinia |
| SS | Astroloma conostephioides | Flame Heath |
| SS | Pultenaea largiflorens | Twiggy Bush-pea |
| SS | Pultenaea prostrata | Silky Bush-pea |
| SS | Hibbertia exutiacies | Spiky Guinea-flower |
| PS | Astroloma humifusum | Cranberry Heath |
| LH | Senecio tenuiflorus | Slender Fireweed |
| MH | Xerochrysum viscosum | Shiny Everlasting |
| MH | Gonocarpus tetragynus | Common Raspwort |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 30 years.

Organic Litter:

20 % cover

Logs+:

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

Weediness:

**LF Code Typical Weed Species Common Name Invasive Impact**

MH Hypochoeris glabra Smooth Cat's-ear high low

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 93: Sandstone Ridge Shrubland (syn. Broombush Mallee) – Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina Bioregion

EVC 93\_61: Treed Sandstone Ridge Shrubland

###### Description:

Low open mallee to 3 m tall typically with a tall shrubby understorey, or shrubland with scattered emergent mallees. A good field character for this EVC is the dominance or co-dominance of the tall shrub Melaleuca uncinata in shrubland or as an understorey shrub in Mallee vegetation. Confined to the crests of outcropping Parilla sandstone ridges and also where these ridges are at least partially obscured by a shallow mantle of Lowan sand.

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | *Eucalyptus behriana Eucalyptus viridis* | Bull Mallee Green Mallee |

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

Medium to Small Tufted Graminoid

###### #Spp %Cover LF Code

9 30% MS

5 10% SS

1 1% PS

1 1% LH

6 15% MH

3 5% MTG

Bryophytes/Lichens 20% BL



Soil Crust 20% S/C

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  *Acacia acinacea s.l.* | **Common Name**  Gold-dust Wattle |
| MS | *Cassinia arcuata* | Drooping Cassinia |
| MS | *Melaleuca uncinata* | Broombush |
| MS | *Ozothamnus obcordatus* | Grey Everlasting |
| SS | *Astroloma conostephioides* | Flame Heath |
| SS | *Hibbertia exutiacies* | Spiky Guinea-flower |
| SS | *Pultenaea largiflorens* | Twiggy Bush-pea |
| SS | *Pultenaea prostrata* | Silky Bush-pea |
| PS | *Astroloma humifusum* | Cranberry Heath |
| LH | *Senecio tenuiflorus s.l.* | Slender Fireweed |
| MH | *Gonocarpus tetragynus* | Common Raspwort |
| MH | *Xerochrysum viscosum* | Shiny Everlasting |
| MTG | *Austrodanthonia setacea* | Bristly Wallaby-grass |
| MTG | *Dianella revoluta s.l.* | Black-anther Flax-lily |

###### Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

###### Organic Litter:

20 % cover

Ecological Vegetation Class Bioregion Benchmark

|  |  |
| --- | --- |
| EVC 93\_61: Treed Sandstone Ridge Shrubland | |
|  | **Logs:**  5 m/0.1ha. (note: large log class does not apply).  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH *Hypochoeris glabra* Smooth Cat's-ear high low  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

Victorian Riverina bioregion

EVC 96: Ridged Plains Mallee

Description:

Open, quite grassy mallee woodland to 10 m tall, typical of the gently undulating “plains” of the Wimmera and Southern Mallee. Soils are somewhat variable but are typically duplex with grey or brown sandy clay loam or clay loam topsoils of aeolian origin.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina luehmannii | 30 cm  40 cm | 15/ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus dumosa  Eucalyptus behriana Allocasuarina luehmannii | Dumosa Mallee  Bull Mallee Buloke |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Medium Shrub | 3 | 5% | MS |
| Small Shrub | 3 | 10% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 2 | 5% | LH |
| Medium Herb\* | 5 | 10% | MH |
| Small or Prostrate Herb\* | 5 | 15% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 1% | LNG |
| Medium to Small Tufted Graminoid | 3 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |

* Largely seasonal lifeform

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia melvillei | **Common Name**  Myall |
| MS | Acacia oswaldii | Umbrella Wattle |
| MS | Eremophila longifolia | Berrigan |
| SS | Maireana brevifolia | Short-leaf Bluebush |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| SS | Rhagodia spinescens | Hedge Saltbush |
| PS | Atriplex semibaccata | Berry Saltbush |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| MH | Maireana enchylaenoides | Wingless Bluebush |
| MH | Maireana excavata | Bottle Bluebush |
| MH | Maireana enchylaenoides | Wingless Bluebush |
| SH | Chenopodium desertorum | Frosted Goosefoot |
| SH | Oxalis perennans | Grassland Wood-sorrel |
| SH | Brachyscome lineariloba | Hard-head Daisy |
| SH | Hyalosperma spp. | Sunray |
| LTG | Austrostipa aristiglumis | Plains Grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MTG | Austrodanthonia caespitosa | Common Wallaby-grass |
| MTG | Austrostipa scabra | Rough Spear-grass |
| LNG | Austrostipa platychaeta | Flat-awned Spear-grass |
| MNG | Austrostipa elegantissima | Feather Spear-grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 96: Ridged Plains Mallee – Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  5% cover  **Logs:**  5m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MTG Critesion murinum Barley-grass high low  MTG Bromus diandrus Great Brome high high  MNG Bromus rubens Red Brome high high  MH Marrubium vulgare Horehound high high  MNG Vulpia spp. Fescue high low  MS Lycium ferocissimum Boxthorn low 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**

Victorian Riverina 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** |
| Allocasuarina spp.  Callitris spp.  Myoporum platycarpum | 40 cm  40 cm  35 cm | 20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **% cover** | **Character Species** | **Common Name** |
| 20% | Allocasuarina luehmannii  Callitris gracilis ssp. murrayensis Myoporum platycarpum | 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 - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20% cover  **Logs:**  20 m/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 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**

Victorian Riverina 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

|  |  |  |
| --- | --- | --- |
| **LF Code**  T+ | **Species typical of at least part of EVC range**  Alectryon oleifolius ssp. canescens | **Common Name**  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 |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 98: Semi-arid Chenopod Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  15% in woodland+  5% in shrubland  **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**

Victorian Riverina bioregion

EVC 101: Samphire Shrubland

Description:

Low open shrub layer to 0.5 m tall of succulent chenopods on saline clay pans. Found in association with the various halite salinas that have developed within evaporative basins or ‘boinkas’.

Life forms:

|  |  |  |  |
| --- | --- | --- | --- |
| **Life form** | **#Spp** | **%Cover** | **LF code** |
| Small Shrub | 4 | 20% | SS |
| Medium Herb | 7 | 5% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Medium to Small Tufted Graminoid | 2 | 1% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 1% | MNG |
| **Total understorey projective foliage cover** |  | **20%** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  SS |  | **Species typical of at least part of EVC range**  Halosarcia pruinosa | **Common Name**  Bluish Glasswort |
| SS |  | Halosarcia halocnemoides ssp. halocnemoides | Grey Glasswort |
| SS |  | Halosarcia pergranulata | Blackseed Glasswort |
| SS | r | Frankenia sessilis | Small-leaf Sea-heath |
| MH |  | Senecio glossanthus | Slender Groundsel |
| MH |  | Hymenolobus procumbens | Oval Purse |
| MH |  | Brachyscome lineariloba | Hard-head Daisy |
| MH | r | Brachyscome exilis | Finger-leaved Daisy |
| SH |  | Disphyma crassifolium ssp. clavellatum | Rounded Noon-flower |
| SH |  | Pogonolepis muelleriana | Stiff Cup-flower |
| SH |  | Crassula sieberiana | Sieber Crassula |
| SH |  | Millotia muelleri | Common Bow-flower |
| MTG |  | Triglochin calcitrapum s.l. | Spurred Arrowgrass |
| MNG |  | Triglochin nanum | Dwarf Arrowgrass |

**Recruitment:**

Continuous

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

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 101: Samphire Shrubland - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 103: Riverine 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 spp. | **DBH(cm)**  50 cm | **#/ha**  5/ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus largiflorens | Black Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| 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 65%

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia stenophylla | **Common Name**  River Coobah |
| MS | Atriplex nummularia | 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:

5% cover

Logs:

5 m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 103: Riverine Chenopod Woodland - Victorian Riverina bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Olea europaea subsp. europaea Olive low high  MS Lycium ferocissimum Boxthorn low 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 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**

Victorian Riverina 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** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| SH | Phyla canescens | Lippia | high | high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 104: Lignum Swamp - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina 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 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 |
| Understorey Tree or Large Shrub | 1 | 10% | T |
| Large Herb | 2 | 10% | LH |
| Medium Herb | 3 | 10% | MH |
| Medium to Small Tufted Graminoid | 3 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 10% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **75%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code** | **Species typical of at least part of EVC range** | **Common Name** |
| T | Acacia stenophylla | Eumong |
| LH | Wahlenbergia fluminalis | River Bluebell |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Goodenia fascicularis | Silky Goodenia |
| MH | Eclipta platyglossa | Yellow Twin-heads |
| MTG | Setaria jubiflora | Warrego Summer-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |

**Recruitment:**

Continuous

Organic Litter:

40 % cover

Logs:

30 m/0.1 ha.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH  LH LH MH MH MH MH MTG MNG | Lactuca serriola  Sonchus oleraceus Centaurea melitensis Hypochoeris glabra  Trifolium arvense var. arvense Reichardia tingitana  Phyla canescens  Vulpia bromoides Bromus rubens | Prickly Lettuce  Common Sow-thistle Malta Thistle Smooth Cat's-ear Hare's-foot Clover False Sow-thistle Fog-fruit  Squirrel-tail Fescue Red Brome | high  high high high high high high high high | low  low low low low low high low low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 106: Grassy Riverine Forest – Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina 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 55%

|  |  |  |
| --- | --- | --- |
| **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 – Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 125: Plains Grassy Wetland

Description:

This EVC is usually treeless, but in some instances can include sparse Black Box Eucalyptus largiflorens or River Red Gum Eucalyptus camaldulensis. A sparse shrub component may also be present. The characteristic ground cover is dominated by grasses and small sedges and herbs. The vegetation is typically species-rich on the outer verges but is usually species-poor in the wetter central areas.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Large Herb | 5 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb | 6 | 10% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 7 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 30% | MNG |
| Bryophytes/Lichens | na | 10% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  LH | **Species typical of at least part of EVC range**  Rumex dumosus | **Common Name**  Wiry Dock |
| LH | Brachyscome basaltica var. gracilis | Woodland Swamp-daisy |
| LH | Epilobium hirtigerum | Hairy Willow-herb |
| LH | Eryngium ovinum | Blue Devil |
| MH | Craspedia glauca spp. agg. | Common Billy-buttons |
| MH | Potamogeton tricarinatus s.l. | Floating Pondweed |
| MH | Marsilea drummondii | Common Nardoo |
| SH | Lobelia concolor | Poison Pratia |
| SH | Limosella australis | Austral Mudwort |
| SH | Myriocephalus rhizocephalus | Woolly-heads |
| SH | Neopaxia australasica | White Purslane |
| LTG | Amphibromus nervosus | Common Swamp Wallaby-grass |
| LTG | Juncus flavidus | Gold Rush |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |
| MTG | Juncus holoschoenus | Joint-leaf Rush |
| MTG | Carex inversa | Knob Sedge |
| MTG | Amphibromus macrorhinus | Long-nosed Swamp Wallaby-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Eragrostis infecunda | Southern Cane-grass |

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: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH  MH LNG MTG MTG MTG | Cirsium vulgare  Hypochoeris radicata Avena fatua  Vulpia bromoides Critesion hystrix Briza minor | Spear Thistle  Cat's Ear Wild Oat  Squirrel-tail Fescue Mediterranean Barley-grass Lesser Quaking-grass | high  high high high high high | high  low low low low low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 125: Plains Grassy Wetland - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 127: Valley Heathy Forest

Description:

A low, open forest to 15 m tall with a sedgy/grassy understorey with a component of small ericoid shrubs and grass-trees. Soil and moisture factors are critical in delimiting the vegetation.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  70 cm | **#/ha**  20 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus melliodora  Eucalyptus goniocalyx s.l. Eucalyptus macrorhyncha | Yellow Box  Bundy  Red Stringybark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 7 | 15% | MS |
| Small Shrub | 5 | 5% | SS |
| Prostrate Shrub | 2 | 1% | PS |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 3 | 5% | LTG |
| Large Non-tufted Graminoid | 2 | 20% | LNG |
| Medium to Small Tufted Graminoid | 6 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 1 | 1% | GF |
| Scrambler or Climber | 3 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 127: Valley Heathy Forest - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Exocarpos cupressiformis Cherry Ballart  MS Epacris impressa Common Heath  MS Cassinia aculeata Common Cassinia  MS Daviesia leptophylla Narrow-leaf Bitter-pea  MS Cassinia arcuata Drooping Cassinia  SS Platylobium obtusangulum Common Flat-pea  SS Dillwynia cinerascens s.l. Grey Parrot-pea  SS Hovea heterophylla Common Hovea  SS Pimelea humilis Common Rice-flower  PS Acrotriche serrulata Honey-pots  PS Bossiaea prostrata Creeping Bossiaea  MH Leptorhynchos tenuifolius Wiry Buttons  MH Gonocarpus tetragynus Common Raspwort  MH Helichrysum scorpioides Button Everlasting  SH Opercularia varia Variable Stinkweed  SH Drosera whittakeri ssp. aberrans Scented Sundew  SH Oxalis corniculata s.l. Yellow Wood-sorrel  LTG Xanthorrhoea minor ssp. lutea Small Grass-tree  LTG Deyeuxia quadriseta Reed Bent-grass  LNG Gahnia radula Thatch Saw-sedge  MTG Lomandra filiformis Wattle Mat-rush  MTG Joycea pallida Silvertop Wallaby-grass  MTG Poa morrisii Soft Tussock-grass  MTG Dianella revoluta s.l. Black-anther Flax-lily  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Lindsaea linearis Screw Fern  SC Billardiera scandens Common Apple-berry  SC Hardenbergia violacea Purple Coral-pea  **Recruitment:**  Episodic/Fire. Desirable period between disturbances is 30 years.  **Organic Litter:**  40 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Pinus radiata Radiata Pine low high  MS Rubus fruticosus spp. agg. Blackberry high high  LH Plantago lanceolata Ribwort high low  MH Hypochoeris radicata Cat's Ear high low MTG Briza maxima Large Quaking-grass high low  MTG Anthoxanthum odoratum Sweet Vernal-grass 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**

Victorian Riverina bioregion

EVC 132: Plains Grassland

Description:

Treeless vegetation dominated by largely grass and herb life forms. Shrubs and trees may be also occasionally present.

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

* Largely seasonal life form

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia oswaldii | **Common Name**  Umbrella Wattle |
| SS | Sclerolaena napiformis | Turnip Copperburr |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Maireana decalvans | Black Cotton-bush |
| SS | Pimelea curviflora s.s. | Curved Rice-flower |
| LH | Ptilotus exaltatus | Mulla Mulla |
| LH | Eryngium ovinum | Blue Devil |
| LH | Calocephalus citreus | Lemon Beauty-heads |
| MH | Calotis scabiosifolia | Rough Burr-daisy |
| MH | Goodenia pinnatifida | Cut-leaf Goodenia |
| MH | Sida corrugata | Variable Sida |
| MH | Ptilotus macrocephalus | Feather Heads |
| SH | Maireana pentagona | Hairy Bluebush |
| SH | Chamaesyce drummondii | Flat Spurge |
| SH | Pogonolepis muelleriana | Stiff Cup-flower |
| LTG | Austrostipa blackii | Crested Spear-grass |
| LTG | Austrostipa gibbosa | Spurred Spear-grass |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Austrostipa scabra | Rough Spear-grass |
| MTG | Austrostipa nodosa | Knotty Spear-grass |
| MTG | Whalleya proluta | Rigid Panic |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |
| SC | Convolvulus erubescens spp. agg. | Pink Bindweed |

Recruitment:

Episodic/Fire or Grazing. Desirable period between disturbances is 5 years.

Organic Litter:

10% cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 132: Plains Grassland - Victorian Riverina bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum Boxthorn high high  LH Helminthotheca echioides Ox-tongue high low LH Lepidium africanum Common Peppercress high low  LH Salvia verbenaca Wild Sage high high  LH Echium plantagineum Patterson’s Curse high high  LH Sisymbrium irio London Rocket high high  LH Marrubium vulgare Horehound high high  LNG Avena fatua Wild Oat high high  MH Limonium sinuatum Wild Oat high high  MH Arctotheca calendula Cape Weed high high  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Hypochoeris radicata Cat's Ear high low  MH Oxalis pes-caprae Soursob high high  MH Plantago coronopus Buck's-horn Plantain high high  MH Spergularia rubra s.l. Red Sand-spurrey high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high high  MH Trifolium arvense var. arvense Hare's-foot Clover high high MH Trifolium campestre var. campestre Hop Clover high high  MH Trifolium striatum Knotted Clover high low  MH Trifolium subterraneum Subterranean Clover high low  MH Hedypnois cretica Cretan Hedypnois high high  MNG Aira cupaniana Quicksilver Grass high low  MNG Avena barbata Bearded Oat high high MNG Brachypodium distachyon False Brome high high  MNG Juncus capitatus Capitate Rush high high  MNG Vulpia muralis Wall Fescue high high  MNG Vulpia myuros Rat's-tail Fescue high high  MTG Bromus diandrus Great Brome high high  MTG Critesion hystrix Mediterranean Barley-grass high high  MTG Critesion murinum Barley-grass high high  MTG Lolium rigidum Wimmera Rye-grass high high MTG Pentaschistis airoides ssp. airoides False Hair-grass high low  MTG Poa bulbosa Bulbous Meadow-grass high high  MTG Romulea minutiflora Small-flower Onion-grass high high  MTG Romulea rosea Onion Grass high high  MTG Vulpia bromoides Squirrel-tail Fescue high high  SH Medicago minima Little Medic high high  SH Medicago polymorpha Burr Medic high high  SH Trifolium glomeratum Cluster Clover high low  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**

Victorian Riverina bioregion

EVC 175\_61: Low Rises Grassy Woodland

Description:

A variable open eucalypt woodland to 15 m tall or occasionally Sheoak woodland to 10 m tall on more skeletal soils. Understorey includes a diverse ground layer of grasses and herbs. The shrub component is usually sparse. It occurs on sites with moderate fertility on gentle slopes or undulating hills on a range of geologies.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina spp. | 70 cm  40 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  15% | **Character Species**  Eucalyptus microcarpa | **Common Name**  Grey Box |
|  | Eucalyptus albens | White Box |
|  | Eucalyptus melliodora | Yellow Box |
|  | Eucalyptus blakelyi | Blakely’s Red Gum |
|  | Allocasuarina verticillata | Drooping Sheoak |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 4 | 5% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 12 | 20% | MH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 19 | 40% | MTG |
| Medium to Tiny Non-tufted Graminoid | 4 | 5% | MNG |
| Ground Fern | 1 | 1% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  MS |  | **Species typical of at least part of EVC range**  Acacia pycnantha | **Common Name**  Golden Wattle |
| MS |  | Bursaria spinosa ssp. spinosa | Sweet Bursaria |
| MS |  | Acacia acinacea s.l. | Gold-dust Wattle |
| SS | r | Templetonia stenophylla | Leafy Templetonia |
| SS |  | Pimelea curviflora s.l. | Curved Rice-flower |
| SS |  | Pimelea humilis | Common Rice-flower |
| SS |  | Eutaxia microphylla | Common Eutaxia |
| PS |  | Astroloma humifusum | Cranberry Heath |
| LH |  | Wahlenbergia stricta | Tall Bluebell |
| MH |  | Asperula conferta | Common Woodruff |
| MH |  | Einadia nutans ssp. nutans | Nodding Saltbush |
| MH |  | Gonocarpus tetragynus | Common Raspwort |
| LTG |  | Austrostipa mollis | Supple Spear-grass |
| MTG |  | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG |  | Themeda triandra | Kangaroo Grass |
| MTG |  | Bothriochloa macra | Red-leg Grass |
| MTG |  | Poa sieberiana | Grey Tussock-grass |
| MNG |  | Austrostipa elegantissima | Feather Spear-grass |
| GF |  | Cheilanthes austrotenuifolia | Green Rock Fern |
| SC |  | Convolvulus erubescens spp. agg. | Pink Bindweed |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 175\_61: Low Rises Grassy Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Sonchus oleraceus Common Sow-thistle high low  LH Plantago lanceolata Ribwort high low  LH Salvia verbenaca Wild Sage high high  LH Carduus tenuiflorus Winged Thistle high high  MH Petrorhagia velutina Velvety Pink high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low MH Hypochoeris radicata Cat's Ear high low  MH Parentucellia latifolia Red Bartsia high low  MH Spergularia rubra s.l. Red Sand-spurrey high low MH Trifolium campestre var. campestre Hop Clover high low  MH Anagallis arvensis Pimpernel high low  LNG Avena fatua Wild Oat high low  MTG Romulea minutiflora Small-flower Onion-grass high low MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low  MTG Lolium loliaceum Stiff Rye-grass high low  MTG Lolium perenne Perennial Rye-grass high low  MTG Ehrharta longiflora Annual Veldt-grass high low  MTG Briza maxima Large Quaking-grass high low  MNG Dactylis glomerata Cocksfoot high high  MNG Vulpia muralis Wall Fescue high low  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Bromus rubens Red Brome high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Aira cupaniana Quicksilver Grass high low  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**

Victorian Riverina bioregion

EVC 175\_62: Shrubby Granitic-outwash Grassy Woodland

Description:

A variable open eucalypt woodland to 15 m tall occurring on the lower slopes of granitic hills where the outwash intersects with the plains. It is restricted to free draining, deep sandy colluviums on gentle, lower slopes at altitudes of less than 300 m. The understorey includes a diverse ground layer of grasses and herbs and may include a suite of heathy shrubs more typical of sandy soils.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina spp. | 70 cm  50 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover**  15% | **Character Species**  Eucalyptus blakelyi | **Common Name**  Blakely’s Red Gum |
|  | Eucalyptus macrorhyncha | Red Stringybark |
|  | Eucalyptus polyanthemos | Red Box |
|  | Eucalyptus melliodora | Yellow Box |
|  | Eucalyptus goniocalyx s.l. | Long-leaf Box |
|  | Allocasuarina verticillata | Drooping Sheoak |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 7 | 15% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Medium Herb | 8 | 10% | MH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 10 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 5 | 10% | MNG |
| Ground Fern | 1 | 1% | GF |
| Scrambler or Climber | 1 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

**Recruitment:**

Continuous

Organic Litter:

20 % cover

Logs:

15 m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 175\_62: Shrubby Granitic-outwash Grassy Woodland - Victorian Riverina bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia implexa Lightwood  T Exocarpos cupressiformis Cherry Ballart  MS Calytrix tetragona Common Fringe-myrtle  MS Brachyloma daphnoides Daphne Heath  SS Acacia aspera Rough Wattle  SS Hibbertia obtusifolia Grey Guinea-flower  SS Dillwynia phylicoides Small-leaf Parrot-pea  SS Hibbertia riparia Upright Guinea-flower  PS Astroloma humifusum Cranberry Heath  MH Chrysocephalum semipapposum Clustered Everlasting  MH Gonocarpus tetragynus Common Raspwort  MH Geranium solanderi s.l. Austral Cranesbill  MH Drosera peltata ssp. auriculata Tall Sundew  SH Drosera whittakeri ssp. aberrans Scented Sundew  SH Hydrocotyle laxiflora Stinking Pennywort  SH Stuartina muelleri Spoon Cudweed  LTG Dichelachne crinita Long-hair Plume-grass  MTG Dianella revoluta s.l. Black-anther Flax-lily  MTG Aristida ramosa Cane Wire-grass  MTG Austrostipa scabra Rough Spear-grass  MTG Elymus scaber var. scaber Common Wheat-grass  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Cheilanthes austrotenuifolia Green Rock Fern  SC Hardenbergia violacea Purple Coral-pea  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Hypericum perforatum St John’s-wort high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Plantago lanceolata Ribwort high low  LH Salvia verbenaca Wild Sage high high  LH Carduus tenuiflorus Winged Thistle high high  MH Petrorhagia velutina Velvety Pink high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low  MH Hypochoeris radicata Cat's Ear high low  MH Parentucellia latifolia Red Bartsia high low  MH Spergularia rubra s.l. Red Sand-spurrey high low MH Trifolium campestre var. campestre Hop Clover high low  MH Anagallis arvensis Pimpernel high low  LNG Avena fatua Wild Oat high low MTG Anthoxanthum odoratum Sweet Vernal-grass high high  MTG Romulea minutiflora Small-flower Onion-grass high low  MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low MTG Lolium loliaceum Stiff Rye-grass high low  MTG Lolium perenne Perennial Rye-grass high low  MTG Ehrharta longiflora Annual Veldt-grass high low  MTG Briza maxima Large Quaking-grass high low  MNG Dactylis glomerata Cocksfoot high high  MNG Vulpia muralis Wall Fescue high low  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Bromus rubens Red Brome high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Aira cupaniana Quicksilver Grass high low  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**

Victorian Riverina bioregion

EVC 235: Plains Woodland / Herb-rich Gilgai Wetland Mosaic

Description:

Open woodland to 15 m tall on broad alluvial plains and along ephemeral drainage lines. Soils are generally poorly drained heavy clays which form distinctive “gilgai” crests and troughs in a fine-scale mosaic. The understorey consists of few, if any shrubs while the ground layer is made up of a combination of “dryland” herbs/grasses and amphibious herbs/grasses tolerant of seasonal inundation.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina luehmannii | 70 cm  40 cm | 10 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus camaldulensis  Eucalyptus microcarpa Allocasuarina luehmannii | River Red-gum  Grey Box Buloke |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Medium Shrub | 2 | 10% | MS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 9 | 15% | MH |
| Small or Prostrate Herb | 3 | 15% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 8 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **90%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia pycnantha | **Common Name**  Golden Wattle |
| MS | Acacia paradoxa | Hedge Wattle |
| PS | Astroloma humifusum | Cranberry Heath |
| LH | Senecio tenuiflorus | Slender Fireweed |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Veronica plebeia | Trailing Speedwell |
| MH | Calotis anthemoides | Cut-leaf Burr-daisy |
| MH | Brachyscome basaltica var. gracilis | Woodland Swamp-daisy |
| MH | Vittadinia cuneata | Fuzzy New Holland-daisy |
| SH | Cymbonotus preissianus | Austral Bear's-ear |
| SH | Myriophyllum integrifolium | Tiny Water-milfoil |
| SH | Phyllangium divergens | Wiry Mitrewort |
| LTG | Juncus pallidus | Pale Rush |
| LTG | Deyeuxia quadriseta | Reed Bent-grass |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Isolepis platycarpa | Broad-fruit Club-sedge |
| MTG | Pentapogon quadrifidus | Five-awned Spear-grass |
| MTG | Burchardia umbellata | Milkmaids |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| TTG | Centrolepis fascicularis | Tufted Centrolepis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 235: Plains Woodland / Herb-rich Gilgai Wetland Mosaic - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Cirsium vulgare Spear Thistle high high  MH Hypochoeris radicata Cat's Ear high low MH Leontodon taraxacoides ssp. taraxacoides Hairy Hawkbit high low MH Arctotheca calendula Cape Weed high low  MH Anagallis arvensis Pimpernel high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Briza minor Lesser Quaking-grass high low  TTG Cyperus tenellus Tiny Flat-sedge high low  Published by the Victorian Government Department of Sustainability and Environment October 2005  © 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**

Victorian Riverina bioregion

EVC 264: Sand Ridge Woodland

Description:

Open pine-box woodland to15 m tall with a small or medium shrub layer of variable density and including a range of annual herbs, grasses and geophytes, in the dense ground layer. Occupies distinctive sandy rises (or sand mounts) adjacent to major rivers and wetlands. Very sandy, deep, free draining, moderately fertile soil, developed on sand blown up by wind action from a prior stream bed.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Callitris glaucophylla Allocasuarina luehmannii | 70 cm  40 cm  40 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus melliodora  Callitris glaucophylla Allocasuarina luehmannii | Yellow Box  WhiteCypress-pine Buloke |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 4 | 20% | MS |
| Small Shrub | 3 | 10% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 10 | 15% | MH |
| Small or Prostrate Herb | 5 | 5% | SH |
| Large Tufted Graminoid | 3 | 10% | LTG |
| Medium to Small Tufted Graminoid | 8 | 15% | MTG |
| Ground Fern | 1 | 5% | GF |
| Scrambler or Climber | 1 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Dodonaea viscosa | **Common Name**  Sticky Hop-bush |
| MS | Banksia marginata | Silver Banksia |
| SS | Pultenaea tenuifolia | Slender Bush-pea |
| SS | Hibbertia riparia | Erect Guinea-flower |
| PS | Kennedia prostrata | Running Postman |
| LH | Senecio quadridentatus | Cottony Fireweed |
| LH | Senecio tenuiflorus | Narrow-leaf Groundsel |
| MH | Wahlenbergia gracilis s.l. | Sprawling Bluebell |
| MH | Wahlenbergia luteola | Tufted Bluebell |
| MH | Gonocarpus tetragynus | Common Raspwort |
| SH | Crassula sieberiana | Sieber Crassula |
| SH | Millotia tenuifolia var. tenuifolia | Soft Millotia |
| SH | Euchiton sphaericus | Annual Cudweed |
| SH | Stuartina muelleri | Spoon Cudweed |
| LTG | Austrostipa mollis | Supple Spear-grass |
| LTG | Dichelachne crinita | Long-hair Plume-grass |
| MTG | Poa sieberiana | Grey Tussock-grass |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| GF | Pteridium esculentum | Austral Bracken |
| SC | Cassytha pubescens s.s. | Downy Dodder-laurel |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 264: Sand Ridge Woodland - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Chrysanthemoides monilifera Boneseed high high MH Hypochoeris glabra Smooth Cat's-ear high low MH Hypochoeris radicata Cat's Ear high low  MTG Bromus diandrus Great Brome high low  MNG Vulpia bromoides Rat’s-tail Fescue high low  MNG Vulpia muralis Wall Fescue high low MNG Vulpia myuros f. myuros Rat's-tail Fescue high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Aira caryophyllea Silvery Hair-grass high low  MNG Ehrharta calycina Perennial Veldt-grass high high  Published by the Victorian Government Department of Sustainability and Environment December 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**

Victorian Riverina bioregion

EVC 292: Red Gum Swamp

Description:

Open woodland to 15 m tall with a diverse understorey dominated by sedgy or grassy-herbaceous aquatics and species tolerant of intermittent to seasonal inundation. Occurs on alluvial plains in the seasonally wet depressions of shallow drainage lines or prior stream meanders, typically associated with heavy paludal soils, sometimes with gilgai development. The annual rainfall across its distribution is generally below 700 mm, and the period of inundation may range from 2 to 6 months.

|  |  |  |
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| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  10 / ha |

Tree Canopy Cover:

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 10% | T |
| Medium Herb | 1 | 15% | MH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 40% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **90%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MH | **Species typical of at least part of EVC range**  Potamogeton tricarinatus s.l. | **Common Name**  Floating Pondweed |
| MH | Gratiola peruviana | Austral Brooklime |
| SH | Lobelia pratioides | Poison Lobelia |
| LTG | Juncus flavidus | Gold Rush |
| LTG | Carex tereticaulis | Hollow Sedge |
| MTG | Triglochin procerum s.l. | Water Ribbons |
| MTG | Whalleya proluta | Rigid Panic |
| MTG | Lachnagrostis filiformis var. filiformis | Common Blown-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Eragrostis infecunda | Southern Cane-grass |

**Recruitment:**

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

Organic Litter:

20 % cover

Logs:

15 m/0.1 ha.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code**  SH | **Typical Weed Species**  Callitriche hamulata | **Common Name**  Thread Water-starwort | **Invasive**  high | **Impact**  low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 292: Red Gum Swamp - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 295: Riverine Grassy Woodland

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 woodland to 20 m tall with a groundlayer dominated by graminoids. Occasional tall shrubs present.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Small Shrub | 1 | 1% | SS |
| Medium Herb | 2 | 1% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 5 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 20% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **65%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MH | Sida corrugata | Variable Sida |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| SH | Chamaesyce drummondii | Flat Spurge |
| SH | Azolla filiculoides | Pacific Azolla |
| LTG | Austrostipa gibbosa | Spurred Spear-grass |
| LTG | Carex tereticaulis | Hollow Sedge |
| MTG | Chloris truncata | Windmill Grass |
| MTG | Themeda triandra | Kangaroo Grass |
| MTG | Aristida behriana | Brush Wire-grass |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MNG | Pseudoraphis spinescens | Spiny Mud-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |

**Recruitment:**

Continuous

Organic Litter:

10 % cover

Logs:

20 m/0.1 ha.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| LH  MTG | Cirsium vulgare  Lolium rigidum | Spear Thistle  Wimmera Rye-grass | high  high | high  low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 295: Riverine Grassy Woodland - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 641: Riparian Woodland

Description:

Occurs beside permanent streams, typically on narrow alluvial deposits. Woodland to 15 m tall generally dominated by Eucalyptus camaldulensis over a tussock grass-dominated understorey. Tall shrubs may be present and amphibious herbs may occur in occasional ponds and beside creeks. While flooding may be common, sites are rarely inundated for lengthy periods.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  15 / ha |

Tree Canopy Cover:

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 2 | 10% | MS |
| Large Herb | 4 | 10% | LH |
| Medium Herb | 5 | 10% | MH |
| Small or Prostrate Herb | 1 | 1% | SH |
| Large Tufted Graminoid | 3 | 10% | LTG |
| Medium to Small Tufted Graminoid | 4 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Scrambler or Climber | 1 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS  LH LH LH LH MH MH MH MH | Exocarpos strictus  Wahlenbergia gracilis s.s. Myriophyllum crispatum Senecio quadridentatus  Wahlenbergia fluminalis Rumex brownii  Oxalis perennans Mentha australis  Acaena novae-zelandiae | Pale-fruit Ballart  Sprawling Bluebell Upright Water-milfoil Cotton Fireweed River Bluebell Slender Dock  Grassland Wood-sorrel River Mint  Bidgee-widgee |
| SH | Dichondra repens | Kidney-weed |
| LTG LTG  LTG LTG  MTG MTG  MTG MTG MNG  MNG SC | Cyperus gunnii ssp. gunnii Carex appressa  Deyeuxia quadriseta Carex tereticaulis  Lachnagrostis filiformis var. filiformis Juncus amabilis  Poa labillardierei Dichelachne crinita Eleocharis acuta  Cynodon dactylon Calystegia sepium | Flecked Flat-sedge Tall Sedge  Reed Bent-grass Hollow Sedge  Common Blown-grass Hollow Rush  Common Tussock-grass Long-hair Plume-grass Common Spike-sedge  Couch  Large Bindweed |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 641: Riparian Woodland – Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  30% cover  **Logs:**  20m / 0.1 ha  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Rosa rubiginosa Sweet Briar high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Cirsium vulgare Spear Thistle high high  LH Plantago lanceolata Ribwort high low  LH Helminthotheca echioides Ox-tongue high low LH Rumex crispus Curled Dock high low  LH Aster subulatus Aster-weed high low  LH Rorippa palustris Marsh Yellow-cress high high MH Leontodon taraxacoides ssp. taraxacoides Hairy Hawkbit high low  MH Hypochoeris radicata Cat's Ear high low  LTG Phalaris aquatica Toowoomba Canary-grass high high  LNG Holcus lanatus Yorkshire Fog high high MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low  MTG Anthoxanthum odoratum Sweet Vernal-grass high high MNG Paspalum distichum Water Couch high high  SC Galium aparine Cleavers high low  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**

Victorian Riverina bioregion

EVC 652: Lunette Woodland

Description:

An open, eucalypt woodland to 15 m tall with a grassy and herb-rich understorey. Occurs on generally fertile, relatively well- drained, clay-loam soils on source-bordering lunettes.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  80 cm | **#/ha**  8 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus camaldulensis  Eucalyptus melliodora | River Red Gum  Yellow Box |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 12 | 45% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia implexa | **Common Name**  Lightwood |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Acacia paradoxa | Hedge Wattle |
| SS | Pimelea humilis | Common Rice-flower |
| LH | Wahlenbergia spp. | Bluebell |
| MH | Sida corrugata | Variable Sida |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| MH | Acaena echinata | Sheep's Burr |
| MH | Convolvulus erubescens spp. agg. | Pink Bindweed |
| SH | Dichondra repens | Kidney-weed |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Lomandra multiflora ssp. multiflora | Many-flowered Mat-rush |
| MTG | Themeda triandra | Kangaroo Grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MTG | Austrodanthonia racemosa var. racemosa | Stiped Wallaby-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 652: Lunette Woodland – Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  10 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum African Box-thorn low high LH Cirsium vulgare Spear Thistle high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Plantago lanceolata Ribwort high low  MH Hypochoeris radicata Cat's Ear high low LNG Holcus lanatus Yorkshire Fog high high  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Romulea rosea Onion Grass high low  MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low  Published by the Victorian Government Department of Sustainability and Environment December 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**

Victorian Riverina bioregion

EVC 803: Plains Woodland (syn. Riverina Plains Grassy Woodland)

Description:

An open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types. Occupies fertile clays and clay loam soils on flat or gently undulating plains at low elevations in areas with <600 mm annual rainfall. The understorey consists of a

few sparse shrubs over a species-rich grassy and herbaceous ground layer and chenopods are often present.

Large trees:

**Species DBH(cm) #/ha**

Eucalyptus spp. 70 cm 15 / ha

Eucalyptus largiflorens 50 cm

Allocasuarina spp. 40 cm

Tree Canopy Cover:

**%cover Character Species Common Name**

15% Eucalyptus microcarpa Grey Box

Eucalyptus melliodora Yellow Box

Eucalyptus camaldulensis River Red Gum

Eucalyptus largiflorens Black Box

Eucalyptus leucoxylon Yellow Gum

Allocasuarina luehmannii Buloke

**Understorey:**

**Life form #Spp %Cover LF code**

Immature Canopy Tree 5% IT

Medium Shrub 2 1% MS

Small Shrub 1 1% SS

Large Herb 1 5% LH

Medium Herb 11 25% MH

Small or Prostrate Herb 2 5% SH

Large Tufted Graminoid 1 5% LTG

Medium to Small Tufted Graminoid 15 45% MTG

Medium to Tiny Non-tufted Graminoid 2 5% MNG

Bryophytes/Lichens na 10% BL

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Acacia montana | **Common Name**  Mallee Wattle |
| MS | Acacia acinacea s.l. | Gold-dust Wattle |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Pittosporum angustifolium | Weeping Pittosporum |
| SS | Pimelea curviflora s.l. | Curved Rice-flower |
| SS | Eutaxia microphylla var. microphylla | Common Eutaxia |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| SS | Sclerolaena diacantha | Grey Copperburr |
| LH | Ajuga australis | Austral Bugle |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Calocephalus citreus | Lemon Beauty-heads |
| MH | Maireana enchylaenoides | Wingless Bluebush |
| MH | Einadia hastata | Saloop |
| MH | Einadia nutans ssp. nutans | Nodding Saltbush |
| SH | Crassula sieberiana | Sieber Crassula |
| SH | Actinobole uliginosum | Flannel Cudweed |
| SH | Oxalis perennans | Grassland Wood-sorrel |
| SH | Calotis hispidula | Hairy Burr-daisy |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Austrodanthonia caespitosa | Common Wallaby-grass |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Austrostipa scabra | Rough Spear-grass |
| MTG | Enteropogon acicularis | Spider Grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 803: Plains Woodland (syn. Riverina Plains Grassy Woodland) - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  10 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum Boxthorn low high  LH Brassica tournefortii Mediterranean Turnip high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Opuntia spp Prickly Pear low high  MH Gazania linearis Gazania high high  MH Spergularia rubra s.l. Red Sand-spurrey high low MH Silene apetala var. apetala Sand Catchfly high low  MH Silene longicaulis Portuguese Catchfly high low  MH Hypochoeris radicata Cat's Ear high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low  MH Arctotheca calendula Cape Weed high low  MH Trifolium campestre var. campestre Hop Clover high low MH Trifolium arvense var. arvense Hare's-foot Clover high low  MH Trifolium subterraneum Subterranean Clover high low  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Trifolium dubium Suckling Clover high low  SH Trifolium glomeratum Cluster Clover low low  SH Medicago minima Little Medic high low  LTG Phalaris aquatica Toowoomba Canary-grass high high  MTG Lolium rigidum Wimmera Rye-grass low low  MTG Schismus barbatus Arabian Grass high low  MTG Poa bulbosa Bulbous Meadow-grass high high MTG Pentaschistis airoides subsp. airoides False Hair-grass high high  MTG Romulea rosea Onion Grass high high  MNG Bromus rubens Red Brome high high  MNG Vulpia myuros Rat's-tail Fescue high low  MNG Romulea rosea Onion Grass high low  MNG Briza minor Lesser Quaking-grass high low  MNG Briza maxima Large Quaking-grass high low  MNG Vulpia bromoides Squirrel-tail Fescue high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Juncus capitatus Capitate Rush 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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EVC/Bioregion Benchmark for Vegetation Quality Assessment

Victorian Riverina 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 | Species typical of at least part of EVC range | Common Name |
| MH | Persicaria prostrata | 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: Victorian Riverina - Murray Fans bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina 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 - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 814: Riverine Swamp Forest

Description:

Open eucalypt forest to 25 m tall with understorey dominated by obligate wetland species (or opportunistic annuals during sustained dry periods) and can range from closed sedgeland or herbland to grassy-herbaceous or extremely sparse and with cover primarily leaf-litter, black water or exposed alluvium. Occupies low-lying areas subject to reasonably regular flooding, typically flood-prone lower river terraces and low-lying areas adjacent to floodways through or within riverine forest.

|  |  |  |
| --- | --- | --- |
| **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 |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 6 | 15% | MH |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 1 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 30% | MNG |
| **Total understorey projective foliage cover** |  | **65%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code** | **Species typical of at least part of EVC range** | **Common Name** |
| LH | Wahlenbergia fluminalis | River Bluebell |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Alternanthera denticulata s.l. | Lesser Joyweed |
| MH | Ranunculus inundatus | River Buttercup |
| MH | Ranunculus pumilio var. pumilio | Fan-leaf Buttercup |
| MH | Centipeda cunninghamii | Common Sneezeweed |
| LNG | Phragmites australis | Common Reed |
| MTG | Lachnagrostis filiformis | Common Blown Grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Cynodon dactylon var. pulchellus | Native Couch |

**Recruitment:**

Continuous

Organic Litter:

20 % cover

Logs:

20 m/0.1 ha.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code**  MH | **Typical Weed Species**  Phyla canescens | **Common Name**  Fog-fruit | **Invasive**  high | **Impact**  high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 814: Riverine Swamp Forest – Victorian Riverina bioregion | |
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EVC/Bioregion Benchmark for Vegetation Quality Assessment

Victorian Riverina bioregion

EVC 815: Riverine Swampy Woodland

Description:

Eucalypt woodland to 15 m tall above a grassy to sedgy – herbaceous ground layer, with species indicative of periodic water- logging. Occupies areas subject to shallow inundation only from higher-level flooding on riverine flood plain. Soils are typically heavy, cracking mottled grey-brown clays/clay-loams and water-retentive, often with a gilgai profile which can be wet during winter.

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 | River Red-gum |
|  | Eucalyptus largiflorens | Black Box |

|  |  |  |  |
| --- | --- | --- | --- |
| Understorey: Life form | #Spp | %Cover | LF code |
| Immature Canopy Tree |  | 5% | IT |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 3 | 10% | MH |
| Small or Prostrate Herb | 1 | 5% | SH |
| Large Tufted Graminoid | 3 | 10% | LTG |
| Medium to Small Tufted Graminoid | 2 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 20% | MNG |
| Total understorey projective foliage cover |  | 65% |  |

|  |  |  |
| --- | --- | --- |
| LF Code  LH | Species typical of at least part of EVC range  Wahlenbergia fluminalis | Common Name  River Bluebell |
| LH | Brachyscome basaltica var. gracilis | Woodland Swamp-daisy |
| MH | Marsilea drummondii | Common Nardoo |
| SH | Lobelia concolor | Poison Pratia |
| LTG | Amphibromus nervosus | Common Swamp Wallaby-grass |
| LTG | Carex tereticaulis | Rush Sedge |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Eleocharis pusilla | Small Spike-sedge |

Recruitment:

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

Organic Litter:

10% cover

Logs:

10 m/0.1 ha.

Weediness:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LF Code  LH | Typical Weed Species  Cirsium vulgare | Common Name  Spear Thistle | Invasive  high | Impact  high |
| MH | Hypochoeris radicata | Cat's Ear | high | low |
| LNG | Avena fatua | Wild Oat | high | low |
| MTG | Vulpia bromoides | Squirrel-tail Fescue | high | low |
| MTG | Critesion hystrix | Mediterranean Barley-grass | high | low |
| MTG | Briza minor | Lesser Quaking-grass | high | low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 815: Riverine Swampy Woodland – Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 816: Sedgy Riverine Forest

Description:

Riverine Sedgy Forest occurs on the floodplain of major rivers in areas of frequent flooding. The overstorey is a tall forest of River Red Gum to 25 m tall. The groundlayer is dominated by flood-related grass and sedge species. Depending on time of year and flooding level, associated water plants may be 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 |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 7 | 15% | MH |
| Small or Prostrate Herb | 3 | 10% | SH |
| Large Tufted Graminoid | 2 | 10% | LTG |
| Medium to Small Tufted Graminoid | 4 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 20% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **80%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  LH | **Species typical of at least part of EVC range**  Epilobium billardierianum ssp. cinereum | **Common Name**  Grey Willow-herb |
| MH | Myriophyllum crispatum | Upright Water-milfoil |
| MH | Goodenia gracilis | Slender Goodenia |
| MH | Lythrum hyssopifolia | Small Loosestrife |
| MH | Marsilea drummondii | Common Nardoo |
| SH | Azolla filiculoides | Pacific Azolla |
| SH | Ludwigia peploides ssp. montevidensis | Clove-strip |
| SH | Lobelia concolor | Poison Pratia |
| SH | Elatine gratioloides | Waterwort |
| LTG | Amphibromus nervosus | Common Swamp Wallaby-grass |
| LTG | Juncus aridicola | Tussock Rush |
| MTG | Triglochin procerum s.l. | Water Ribbons |
| MTG | Carex inversa | Knob Sedge |
| MTG | Setaria jubiflora | Warrego Summer-grass |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |
| MNG | Eleocharis pusilla | Small Spike-sedge |
| MNG | Eleocharis acuta | Common Spike-sedge |
| EP | Muellerina eucalyptoides | Creeping Mistletoe |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 816: Sedgy Riverine Forest - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  10 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Cirsium vulgare Spear Thistle high high  MTG Lolium rigidum Wimmera Rye-grass high low  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**

Victorian Riverina 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** |
| Medium Herb | 2 | 5% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 60% | MNG |
| **Total understorey projective foliage cover** |  | **75%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MH | **Species typical of at least part of EVC range**  Lythrum hyssopifolia | **Common Name**  Small Loosestrife |
| SH | Crassula helmsii | Swamp Crassula |
| MTG | Triglochin procerum s.l. | Water-ribbons |
| MTG | Lachnagrostis filiformis | Common Blown Grass |
| MNG | Eleocharis acuta | Common Spike-sedge |

Recruitment:

Episodic/Flood – desirable period is every five years

Organic Litter:

20% Cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina bioregion

EVC 821: Tall Marsh

Description:

Wetland dominated by tall emergent graminoids (rushes, sedges, reeds), typically in thick species-poor swards. Competitive exclusion in core wetland habitat - of optimum growing conditions for species tolerant of sustained shallow inundation. Occupies wetlands usually associated with anabranch creeks. Soils are almost permanently moist. Dominant species are tolerant of relatively deep and sustained inundation, but not total immersion for any sustained period.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** Medium Herb | **#Spp**  6 | **%Cover**  20% | **LF code**  MH |
| Small or Prostrate Herb | 3 | 10% | SH |
| Large Tufted Graminoid | 1 | 10% | LTG |
| Large Non-tufted Graminoid | 3 | 40% | LNG |
| Medium to Tiny Non-tufted Graminoid | 2 | 10% | MNG |
| **Total understorey projective foliage cover** |  | **90%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MH | **Species typical of at least part of EVC range**  Myriophyllum papillosum | **Common Name**  Robust Water-milfoil |
| MH | Persicaria decipiens | Slender Knotweed |
| MH | Lythrum hyssopifolia | Small Loose-strife |
| MH | Potamogeton tricarinatus s.l. | Floating Pondweed |
| SH | Lemna disperma | Common Duckweed |
| SH | Azolla filiculoides | Pacific Azolla |
| LTG | Juncus ingens | Giant Rush |
| LNG | Schoenoplectus tabernaemontani | River Club-sedge |
| LNG | Phragmites australis | Common Reed |
| LNG | Typha orientalis | Broad-leaf Cumbungi |
| LNG | Typha domingensis | Cumbungi |
| MTG | Triglochin procerum s.l. | Water Ribbons |
| MNG | Eleocharis acuta | Common Spike-sedge |
| MNG | Pseudoraphis spinescens | Spiny Mud-grass |

Recruitment:

Episodic/Flood: desirable period of disturbance is every year

Organic Litter:

10% cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| T MH  MTG MNG | Salix cinerea Rorippa palustris  Polyopogon monspeliensis Paspalum distichum | Grey Sallow  Yellow Marsh-cress Annual Beard-grass  Water Couch | high high  high high | high high  low high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 821: Tall Marsh - Victorian Riverina bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Victorian Riverina 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 low 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 | Black Box  River Red Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 2 | 30% | MS |
| Small Shrub | 1 | 5% | SS |
| Large Herb | 2 | 1% | MH |
| Medium Herb\* | 8 | 10% | MH |
| Small or Prostrate Herb\* | 4 | 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 80%

|  |  |  |
| --- | --- | --- |
| **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 |
| MS | Muehlenbeckia florulenta | Tangled Lignum |
| 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 |
| LNG | Eragrostis australasica | Cane Grass |
| 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 |
| MNG | Eragrostis infecunda | Southern 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 - Victorian Riverina 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**

Victorian Riverina bioregion

EVC 826: Plains Savannah

Description:

A structurally diverse vegetation unit which includes ‘grassy openings’ of a few to many hundreds of hectares, with a variable tree density ranging from a very sparse savanna to woodland. The relative absence of eucalypts is particularly characteristic, with Allocasuarina luehmannii and perhaps Callitris gracilis subsp. murrayensis to 10 m tall being the dominant trees. Widespread on the northern plains.

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

Large trees+:

|  |  |  |
| --- | --- | --- |
| **Species** | **DBH(cm)** | **#/ha** |
| Allocasuarina luehmannii  Callitris gracilis ssp. murrayensis | 40 cm | 5/ha |

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

**% cover Character Species Common Name**

10% Allocasuarina luehmannii Buloke

Callitris gracilis ssp. murrayensis Slender Cypress-pine

Understorey:

**Life form #Spp %Cover LF code**

Immature Canopy Tree+ 5% IT

Small Shrub 2 5% SS

Large Herb 3 5% LH

Medium Herb\* 6 20% MH

Small or Prostrate Herb\* 3 10% SH

Large Tufted Graminoid 1 5% LTG

Large Non-tufted Graminoid 1 5% LNG

Medium to Small Tufted Graminoid 5 35% MTG

Medium to Tiny Non-tufted Graminoid\* 2 5% MNG

Bryophytes/Lichens na 10% BL

Soil Crust na 25% S/C

* Largely seasonal life form

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia pendula | **Common Name**  Boree |
| MS | Acacia oswaldii | Umbrella Wattle |
| SS | Sclerolaena napiformis | Turnip Copperburr |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Maireana decalvans | Black Cotton-bush |
| SS | Pimelea curviflora s.s. | Curved Rice-flower |
| LH | Ptilotus exaltatus | Mulla Mulla |
| LH | Eryngium ovinum | Blue Devil |
| LH | Calocephalus citreus | Lemon Beauty-heads |
| LH | Arthropodium fimbriatum | Nodding Chocolate-lily |
| MH | Calotis scabiosifolia | Rough Burr-daisy |
| MH | Goodenia pinnatifida | Cut-leaf Goodenia |
| MH | Sida corrugata | Variable Sida |
| MH | Ptilotus macrocephalus | Feather Heads |
| SH | Maireana pentagona | Hairy Bluebush |
| SH | Chamaesyce drummondii | Flat Spurge |
| SH | Pogonolepis muelleriana | Stiff Cup-flower |
| SH | Convolvulus erubescens spp. agg. | Pink Bindweed |
| LTG | Austrostipa blackii | Crested Spear-grass |
| LTG | Austrostipa gibbosa | Spurred Spear-grass |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Austrostipa scabra | Rough Spear-grass |
| MTG | Austrostipa nodosa | Knotty Spear-grass |
| MTG | Whalleya proluta | Rigid Panic |
| MTG | Austrodanthonia duttoniana | Brown-back Wallaby-grass |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 826: Plains Savannah - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  5% cover  **Logs**+**:**  5 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Lycium ferocissimum Boxthorn high high  LH Helminthotheca echioides Ox-tongue high low LH Lepidium africanum Common Peppercress high low  LH Salvia verbenaca Wild Sage high high  LH Echium plantagineum Patterson’s curse high high  LH Sisymbrium irio London Rocket high high  LH Marrubium vulgare Horehound high high  LNG Avena fatua Wild Oat high high  MH Limonium sinuatum Notch-leaf Sea-lavender high high  MH Arctotheca calendula Cape Weed high high  MH Hypochoeris glabra Smooth Cat's-ear high low  MH Hypochoeris radicata Cat's Ear high low  MH Oxalis pes-caprae Soursob high high  MH Plantago coronopus Buck's-horn Plantain high high  MH Spergularia rubra s.l. Red Sand-spurrey high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high high  MH Trifolium arvense var. arvense Hare's-foot Clover high high  MH Trifolium campestre var. campestre Hop Clover high high MH Trifolium striatum Knotted Clover high low  MH Trifolium subterraneum Subterranean Clover high low  MH Hedypnois cretica Cretan Hedypnois high high  MNG Aira cupaniana Quicksilver Grass high low  MNG Avena barbata Bearded Oat high high  MNG Brachypodium distachyon False Brome high high MNG Juncus capitatus Capitate Rush high high  MNG Vulpia muralis Wall Fescue high high  MNG Vulpia myuros Rat's-tail Fescue high high  MTG Bromus diandrus Great Brome high high  MTG Critesion hystrix Mediterranean Barley-grass high high  MTG Critesion murinum Barley-grass high high  MTG Lolium rigidum Wimmera Rye-grass high high MTG Pentaschistis airoides ssp. airoides False Hair-grass high low  MTG Poa bulbosa Bulbous Meadow-grass high high  MTG Romulea minutiflora Small-flower Onion-grass high high  MTG Romulea rosea Onion Grass high high  MTG Vulpia bromoides Squirrel-tail Fescue high high  SH Medicago minima Little Medic high high  SH Medicago polymorpha Burr Medic high high  SH Trifolium glomeratum Cluster Clover high low  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**

Victorian Riverina Bioregion

EVC 826\_61: Treed Plains Savannah

###### Description:

A structurally diverse vegetation unit which includes 'grassy openings' of a few to many hundreds of hectares, with a variable tree density ranging from a very sparse savanna to woodland. The relative absence of eucalypts is particularly characteristic, with Allocasuarina luehmannii and perhaps Callitris gracilis subsp. murrayensis to 10 m tall being the dominant trees. Widespread on the northern plains.

###### Large Trees:

**Species DBH(cm) #/ha**

*Allocasuarina luehmannii*

*Callitris gracilis subsp. murrayensis*

###### Tree Canopy Cover:

40 cm

0 cm

5 / ha

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | *Allocasuarina luehmannii*  *Callitris gracilis subsp. murrayensis* | Buloke  Slender Cypress-pine |

###### Understorey: Lifeform

**#Spp %Cover LF Code**

Immature Canopy Tree 5% IT

Small Shrub Large Herb Medium Herb\*

Small or Prostrate Herb\* Large Tufted Graminoid Large Non-Tufted Graminoid

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

1. 5% SS
2. 5% LH

6 20% MH

3 10% SH

1 5% LTG

1 5% LNG

5 35% MTG

2 5% MNG

Bryophytes/Lichens 10% BL



Soil Crust 25% S/C

\*Largely seasonal lifeform

Ecological Vegetation Class Bioregion Benchmark

|  |  |  |
| --- | --- | --- |
| EVC 826\_61: Treed Plains Savannah | | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  SS *Maireana decalvans* Black Cotton-bush  SS *Pimelea curviflora s.s.* Curved Rice-flower  SS *Sclerolaena diacantha* Grey Copperburr  SS E e *Sclerolaena napiformis* Turnip Copperburr  LH *Arthropodium fimbriatum* Nodding Chocolate-lily  LH *Calocephalus citreus* Lemon Beauty-heads  LH *Eryngium ovinum* Blue Devil  LH *Ptilotus exaltatus* Mulla Mulla  MH *Calotis scabiosifolia* Rough Burr-daisy  MH *Goodenia pinnatifida* Cut-leaf Goodenia  MH *Ptilotus macrocephalus* Feather Heads  MH *Sida corrugata* Variable Sida  SH *Chamaesyce drummondii* Flat Spurge  SH *Convolvulus erubescens spp. agg.* Pink Bindweed  SH *Maireana pentagona* Hairy Bluebush  SH *Pogonolepis muelleriana* Stiff Cup-flower  LTG *Austrostipa aristiglumis* Plump Spear-grass  LTG *Austrostipa blackii* Crested Spear-grass  LTG *Austrostipa gibbosa* Spurred Spear-grass LNG *Various spp.*  MTG *Austrodanthonia duttoniana* Brown-back Wallaby-grass  MTG *Austrostipa nodosa* Knotty Spear-grass  MTG *Austrostipa scabra* Rough Spear-grass  MTG *Whalleya proluta* Rigid Panic  MNG *Various spp.*  **Recruitment:**  Continuous.  **Organic Litter:**  5 % cover  **Logs:**  5 m/0.1ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS *Lycium ferocissimum* African Box-thorn high high SH *Medicago polymorpha* Burr Medic high high MTG *Poa bulbosa* Bulbous Meadow-grass high high  MTG *Romulea minutiflora* Small-flower Onion-grass high high MH *Trifolium angustifolium var.* Narrow-leaf Clover high high  *angustifolium*  MH *Plantago coronopus* Buck's-horn Plantain high high  MH *Limonium sinuatum* Notch-leaf Sea-lavender high high  MH *Arctotheca calendula* Cape Weed high high  LNG *Avena fatua* Wild Oat high high  MNG *Juncus capitatus* Capitate Rush high high  MNG *Vulpia muralis* Wall Fescue high high  MNG *Vulpia myuros* Rat's-tail Fescue high high  MTG *Bromus diandrus* Great Brome high high  MTG *Hordeum hystrix* Mediterranean Barley-grass high high MTG *Hordeum murinum s.l.* Barley-grass high high MTG *Lolium rigidum* Wimmera Rye-grass high high  LH *Marrubium vulgare* Horehound high high  MH *Oxalis pes-caprae* Soursob high high MH *Trifolium arvense var. arvense* Hare's-foot Clover high high | |
|  |  |  |
|  | Ecological Vegetation Class Bioregion Benchmark | |



|  |  |
| --- | --- |
| EVC 826\_61: Treed Plains Savannah | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH *Trifolium campestre var. campestre* Hop Clover high high MH *Hedypnois cretica* Cretan Hedypnois high high  MNG *Avena barbata* Bearded Oat high high MNG *Brachypodium distachyon* False Brome high high MTG *Romulea rosea* Onion Grass high high  MTG *Vulpia bromoides* Squirrel-tail Fescue high high LH *Echium plantagineum* Paterson's Curse high high LH *Sisymbrium irio* London Rocket high high  SH *Trifolium glomeratum* Cluster Clover high low  LH *Lepidium africanum* Common Peppercress high low  MH *Hypochoeris glabra* Smooth Cat's-ear high low  MH *Spergularia rubra s.l.* Red Sand-spurrey high low  MH *Hypochoeris radicata* Cat's Ear high low  MH *Trifolium striatum* Knotted Clover high low MH *Trifolium subterraneum* Subterranean Clover high low MNG *Aira cupaniana* Quicksilver Grass high low MTG *Pentaschistis airoides subsp. airoides* False Hair-grass high low LH *Helminthotheca echioides* Ox-tongue high low SH *Medicago minima* Little Medic high high  LH *Salvia verbenaca* Wild Sage 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

Victorian Riverina bioregion

EVC 829: Chenopod Grassland

Description:

Open to sparse shrubland with a more or less continuous tussock grass sward found on heavy somewhat sodic clay plains fringing the active floodplains of major watercourses such as the Loddon and Avoca Rivers.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 2 | 20% | MS |
| Small Shrub | 6 | 30% | SS |
| Prostrate Shrub | 2 | 1% | PS |
| Large Herb | 2 | 5% | LH |
| Medium Herbs\* | 4 | 10% | MH |
| Small or Prostrate Herbs\* | 4 | 5% | SH |
| Medium to Small Tufted Graminoid | 3 | 20% | MTG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 20% | S/C |

* Largely seasonal life form

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Lycium australe | **Common Name**  Australian Box-thorn |
| MS | Nitraria billardierei | Nitre-bush |
| SS | Maireana aphylla | Leafless Bluebush |
| SS | Sclerolaena diacantha | Grey Copperburr |
| SS | Minuria cunninghamii | Bush Minuria |
| SS | Rhagodia spinescens | Hedge Saltbush |
| PS | Sclerochlamys brachyptera | Short-wing Saltbush |
| PS | Atriplex semibaccata | Berry Saltbush |
| LH | Podolepis canescens | Grey Podolepis |
| LH | Leiocarpa panaetioides | Woolly Buttons |
| MH | Rhodanthe stuartiana | Clay Sunray |
| MH | Teucrium racemosum s.s. | Grey Germander |
| MH | Maireana excavata | Bottle Bluebush |
| MH | Sida corrugata | Variable Sida |
| SH | Hyalosperma glutinosum ssp. glutinosum | Golden Sunray |
| SH | Hyalosperma semisterile | Orange Sunray |
| SH | Rhodanthe pygmaea | Pygmy Sunray |
| SH | Pogonolepis muelleriana | Stiff Cup-flower |
| LTG | Austrostipa aristiglumis | Plump Spear-grass |
| MTG | Austrostipa spp. | Spear-grass |
| MTG | Whalleya proluta | Rigid Panic |
| MTG | Enteropogon acicularis | Spider Grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |

Recruitment:

Continuous

Organic Litter:

5% cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 829: Chenopod Grassland - Victorian Riverina bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Carthamus lanatus Saffron Thistle high high  MH Limonium lobatum Winged Sea-lavender high high  MH Hedypnois cretica Cretan Hedypnois high high  MH Arctotheca calendula Cape Weed high high  MH Romulea rosea Onion Grass high high  SH Moraea setifolia Thread Iris high high  SH Medicago spp. Medic high high MTG Critesion murinum subsp. leporinum Wall Barley-grass high high  MNG Bromus madritensis Madrid Brome high high  MNG Lolium rigidum Wimmera Rye-grass 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**

Victorian Riverina bioregion

EVC 882: Shallow Sands Woodland (syn. Pine Box Woodland)

Description:

Woodland or open-forest to 15 m tall, with a sparse shrub layer of heathy, ericoid shrubs and a species-rich ground cover dominated by grasses and annual herbs. Typically it occurs between the heavier soils of the plains and the deep-sand aeolian dunefields which overlay these plains, but also occurs on broader areas of plains covered by shallow fluvial, outwash or aeolian sands overlaying drainage-impeding clays.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp.  Allocasuarina luehmannii Callitris glaucophylla | 70 cm  40 cm  40 cm | 15 / ha |

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus melliodora  Allocasuarina luehmannii Callitris glaucophylla | Yellow Box  Buloke  White Cypress-pine |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 4 | 15% | MS |
| Small Shrub | 3 | 10% | SS |
| Prostrate Shrub | 1 | 5% | PS |
| Medium Herb | 10 | 20% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 13 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Exocarpos cupressiformis | **Common Name**  Cherry Ballart |
| MS | Acacia montana | Mallee Wattle |
| MS | Acacia pycnantha | Golden Wattle |
| MS | Acacia verniciflua | Varnish Wattle |
| MS | Bursaria spinosa ssp. spinosa | Sweet Bursaria |
| SS | Pimelea curviflora s.s. | Curved Rice-flower |
| SS | Eutaxia microphylla | Common Eutaxia |
| SS | Enchylaena tomentosa var. tomentosa | Ruby Saltbush |
| PS | Astroloma humifusum | Cranberry Heath |
| MH | Wahlenbergia luteola | Yellowish Bluebell |
| MH | Acaena echinata | Sheep's Burr |
| SH | Daucus glochidiatus | Australian Carrot |
| SH | Drosera whittakeri ssp. aberrans | Scented Sundew |
| LTG | Dichelachne crinita | Long-hair Plume-grass |
| MTG | Austrodanthonia geniculata | Kneed Wallaby-grass |
| MTG | Austrodanthonia setacea | Bristly Wallaby-grass |
| MTG | Schoenus apogon | Common Bog-sedge |
| MTG | Lomandra multiflora ssp. multiflora | Many-flowered Mat-rush |
| TTG | Centrolepis strigosa ssp. strigosa | Hairy Centrolepis |
| SC | Thysanotus patersonii | Twining Fringe-lily |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 882: Shallow Sands Woodland (syn. Pine Box Woodland) - Victorian Riverina bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Centaurium tenuiflorum Slender Centaury high low  MH Hypochoeris radicata Cat's Ear high low  MH Hypochoeris glabra Smooth Cat's-ear high low MH Trifolium campestre var. campestre Hop Clover high low MH Trifolium angustifolium var. angustifolium Narrow-leaf Clover high low  MH Trifolium arvense var. arvense Hare's-foot Clover high low MH Petrorhagia velutina Velvety Pink high low  MTG Briza minor Lesser Quaking-grass high low  MTG Briza maxima Large Quaking-grass high low  MTG Romulea rosea Onion Grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MNG Aira elegantissima Delicate Hair-grass high low  MNG Vulpia myuros f. myuros Rat's-tail Fescue high low  MNG Juncus capitatus Capitate Rush high low  MNG Bromus rubens Red Brome high low  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**

Victorian Riverina bioregion

EVC 888: Plains Saltmarsh

Description:

Typically species-poor samphire dominated low shrubland to 0.5 m tall, or locally variously herbland or grassland. Occurs in seasonally or intermittently waterlogged shallow depressions on salinised heavy grey clay soils.

Life Forms:

|  |  |  |  |
| --- | --- | --- | --- |
| **Life form** | **#Spp** | **%Cover** | **LF code** |
| Small Shrub | 1 | 10% | SS |
| Prostrate Shrub | 1 | 5% | PS |
| Medium Herb | 3 | 15% | MH |
| Small or Prostrate Herb | 2 | 10% | SH |
| Medium to Small Tufted Graminoid | 1 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 10% | MNG |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **60%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  SS | **Species typical of at least part of EVC range**  Halosarcia pergranulata | **Common Name**  Blackseed Glasswort |
| SS | Halosarcia syncarpa | Fused Glasswort |
| PS | Wilsonia rotundifolia | Round-leaf Wilsonia |
| MH | Sarcocornia quinqueflora | Beaded Glasswort |
| MH | Samolus repens | Creeping Brookweed |
| MH | Spergularia sp. 3 | Salt Sea-spurrey |
| SH | Selliera radicans | Shiny Swamp-mat |
| SH | Angianthus preissianus | Salt Angianthus |
| SH | Apium prostratum ssp. prostratum | Annual Celery |
| MTG | Puccinellia stricta var. perlaxa | Plains Saltmarsh-grass |
| MNG | Distichlis distichophylla | Australian Salt-grass |

**Recruitment:**

Continuous

Organic Litter:

10% cover

Weediness:

There are no consistent weeds in this EVC.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 888: Plains Saltmarsh - Victorian Riverina bioregion | |
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