

### EVC/Bioregion Benchmark for Vegetation Quality Assessment

Highlands – Northern Fall bioregion

EVC 3: Damp Sands Herb-rich Woodland

###### Description:

A low, grassy or bracken-dominated eucalypt forest or open woodland to 15 m tall with a large shrub layer and ground layer rich in herbs, grasses, and orchids. Occurs mainly on flat or undulating areas on moderately fertile, relatively well-drained, deep sandy or loamy topsoils over heavier subsoils (duplex soils).

###### Large trees:

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

Eucalyptus spp. 70 cm 15 / ha

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus ovata  Eucalyptus viminalis | Swamp Gum  Manna Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 10% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 3 | 5% | SS |
| Medium Herb | 12 | 20% | MH |
| Small or Prostrate Herb | 7 | 15% | SH |
| Large Tufted Graminoid | 1 | 10% | LTG |
| Medium to Small Tufted Graminoid | 10 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 10% | MNG |
| Ground Fern | 1 | 10% | GF |
| Bryophytes/Lichens | na | 10% | BL |

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| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia mearnsii | **Common Name**  Black Wattle |
| MS | Bursaria spinosa | Sweet Bursaria |
| MS | Acacia verticillata | Prickly Moses |
| MS | Ozothamnus ferrugineus | Tree Everlasting |
| MS | Leptospermum continentale | Prickly Tea-tree |
| SS | Pimelea humilis | Common Rice-flower |
| SS | Lissanthe strigosa ssp. subulata | Peach Heath |
| SS | Hibbertia riparia | Erect Guinea-flower |
| MH | Geranium solanderi | Austral Cranesbill |
| MH | Drosera peltata ssp. auriculata | Tall Sundew |
| MH | Hydrocotyle foveolata | Yellow Pennywort |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| SH | Drosera whittakeri ssp. aberrans | Scented Sundew |
| SH | Oxalis exilis | Shady Wood-sorrel |
| SH | Viola cleistogamoides | Hidden Violet |
| SH | Opercularia ovata | Broad-leaf Stinkweed |
| LTG | Austrostipa rudis ssp. nervosa | Veined Spear-grass |
| LTG | Juncus pallidus | Pale Rush |
| MTG | Poa sieberiana var. sieberiana | Grey Tussock-grass |
| MTG | Lomandra filiformis ssp. coriacea | Wattle Mat-rush |
| MTG | Austrodanthonia racemosa var. racemosa | Stiped Wallaby-grass |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Pteridium esculentum | Austral Bracken |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 3: Damp Sands Herb-rich Woodland Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Pinus radiata Radiata Pine high high MH Leontodon taraxacoides ssp. taraxacoides Hairy Hawkbit high low MH Hypochoeris radicata Cat's Ear high low  LNG Holcus lanatus Yorkshire Fog high high MTG Anthoxanthum odoratum Sweet Vernal-grass high high  MTG Juncus microcephalus Tiny-headed Rush high low  MTG Briza maxima Large Quaking-grass high low  MNG Aira caryophyllea Silvery 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**

Highlands – Northern Fall bioregion

EVC 7: Clay Heathland

###### Description:

Occurs on sites with impeded drainage, often on duplex soils. Dominated by heathy shrub species with or without an eucalypt overstorey. The ground layer is dense and diverse with a variety of landforms.

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

###### Large trees+:

|  |  |  |
| --- | --- | --- |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp. | 40 cm | 10 / ha |

**Tree Canopy Cover+:**

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus dives  Eucalyptus macrorhyncha Eucalyptus mannifera | Broad-leaved Peppermint  Red Stringybark Brittle Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 9 | 30% | MS |
| Small Shrub | 6 | 10% | SS |
| Prostrate Shrub | 3 | 5% | PS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 8 | 10% | MH |
| Large Tufted Graminoid | 4 | 10% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 7 | 10% | 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** |  | **75%** |  |

Ecological Vegetation Class bioregion benchmark

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| --- | --- |
| EVC 7: Clay Heathland  Highlands - Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  MS Epacris impressa Common Heath  MS Leptospermum continentale Prickly Tea-tree  MS Banksia marginata Silver Banksia  MS Cassinia longifolia Shiny Cassinia  SS Kunzea parvifolia Violet Kunzea  SS Pimelea humilis Common Rice-flower  SS Gompholobium huegelii Common Wedge-pea  SS Dillwynia phyllicoides Small-leaf Parrot-pea  PS Acrotriche serrulata Honey-pots  PS Bossiaea prostrata Creeping Bossiaea  PS Pultenaea procumbens Heathy Bush-pea  PS Boronia nana Dwarf Boronia  MH Lagenophora gracilis Slender Bottle-daisy  MH Gonocarpus tetragynus Common Raspwort  MH Hypericum gramineum Small St John's Wort  MH Viola betonicifolia ssp. betonicifolia Showy Violet  SH Mitrasacme serpyllifolia Thyme Mitrewort  LTG Deyeuxia quadriseta Reed Bent-grass  LTG Xanthorrhoea minor ssp. lutea Small Grass-tree  LNG Gahnia radula Thatch Saw-sedge  MTG Schoenus apogon Common Bog-sedge  MTG Poa sieberiana Grey Tussock-grass  MTG Lepidosperma laterale Variable Sword-sedge  MTG Themeda triandra Kangaroo Grass  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Caustis flexuosa Curly Wig  MNG Echinopogon ovatus Common Hedgehog-grass  **Recruitment:**  Episodic/Fire. Desirable period between disturbances is 30 years.  **Organic Litter:**  20% Cover  **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 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**

Highlands – Northern Fall bioregion

EVC 16: Lowland Forest

###### Description:

Eucalypt forest to 25 m tall on relatively fertile, moderately well-drained soils in areas of relatively high rainfall. Characterised by the diversity of life forms and species in the understorey including a range of shrubs, grasses and herbs.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus obliqua  Eucalyptus radiata s.l. | Messmate Stringybark  Narrow-leaf Peppermint |

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

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 16: Lowland Forest  Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Pomaderris aspera Hazel Pomaderris  T Acacia dealbata Silver Wattle  MS Goodenia ovata Hop Goodenia  MS Acacia verticillata Prickly Moses  MS Pimelea axiflora Bootlace Bush  MS Olearia phlogopappa Dusty Daisy-bush  SS Tetratheca ciliata Pink-bells  SS Lomatia ilicifolia Holly Lomatia  SS Hovea heterophylla Common Hovea  SS Rubus parvifolius Small-leaf Bramble  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Lagenophora stipitata Common Bottle-daisy  MH Stackhousia monogyna Creamy Stackhousia  MH Geranium potentilloides Cinquefoil Cranesbill  SH Leptostigma reptans Dwarf Nertera  SH Oxalis exilis Shady Wood-sorrel  SH Asperula euryphylla var. euryphylla Broad-leaf Woodruff  LTG Lomandra longifolia Spiny-headed Mat-rush  LNG Tetrarrhena juncea Forest Wire-grass  MTG Poa ensiformis Sword Tussock-grass  MTG Dianella caerulea var. caerulea Paroo Lily  MTG Lepidosperma laterale Variable Sword-sedge  MNG Poa tenera Slender Tussock-grass  GF Pteridium esculentum Austral Bracken  GF Calochlaena dubia Common Ground-fern  GF Lindsaea linearis Screw Fern  SC Cassytha pubescens s.s. Downy Dodder-laurel  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  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**

Highlands – Northern Fall bioregion

EVC 18: Riparian Forest

###### Description:

A forest to 30 m tall of river banks and associated alluvial terraces with occasional occurrences in the heads of gullies leading into creeks and rivers. The soil is 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.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus viminalis | Manna Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 4 | 20% | T |
| Medium Shrub | 7 | 15% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 10 | 15% | MH |
| Small or Prostrate Herb | 3 | 1% | SH |
| Large Tufted Graminoid | 4 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 1% | MNG |
| Ground Fern | 5 | 25% | GF |
| Tree Fern | 2 | 10% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 18: Riparian Forest  Highlands - Northern Fall Bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia melanoxylon Blackwood  T Pomaderris aspera Hazel Pomaderris  T Acacia dealbata Silver Wattle  MS Coprosma quadrifida Prickly Currant-bush  MS Cassinia aculeata Common Cassinia  MS Prostanthera lasianthos Victorian Christmas-bush  MS Olearia phlogopappa Dusty Daisy-bush  LH Mentha laxiflora Forest Mint  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Acaena novae-zelandiae Bidgee-widgee  MH Geranium potentilloides Cinquefoil Cranesbill  SH Hydrocotyle hirta Hairy Pennywort  SH Dichondra repens Kidney-weed  SH Galium propinquum Maori Bedstraw  LTG Carex appressa Tall Sedge  LTG Poa labillardierei Common Tussock-grass  LNG Tetrarrhena juncea Forest Wire-grass  MTG Dianella tasmanica Tasman Flax-lily  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Poa tenera Slender Tussock-grass  GF Blechnum nudum Fishbone Water-fern  GF Pteridium esculentum Austral Bracken  GF Polystichum proliferum Mother Shield-fern  GF Adiantum aethiopicum Common Maidenhair  TRF Dicksonia antarctica Soft Tree-fern  TRF Cyathea australis Rough Tree-fern  SC Clematis aristata Mountain Clematis  **Recruitment:**  Continuous  **Organic Litter:**  40 % 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  MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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

Highlands – Northern Fall bioregion

EVC 19: Riparian Shrubland

###### Description:

Diverse, 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. 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** |
| 40% | Acacia melanoxylon  Leptospermum grandifolium | Blackwood  Mountain Tea-tree |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 9 | 20% | MS |
| Medium Herb | 2 | 5% | MH |
| Large Tufted Graminoid | 1 | 10% | LTG |
| Medium to Small Tufted Graminoid | 4 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 4 | 10% | GF |
| Tree Fern | 2 | 1% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |
| **Total understorey projective foliage cover** |  | **65%** |  |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Coprosma quadrifida | **Common Name**  Prickly Currant-bush |
| MS | Hedycarya angustifolia | Austral Mulberry |
| MS | Kunzea ericoides | Burgan |
| MS | Micrantheum hexandrum | Box Micrantheum |
| MH | Euchiton collinus s.l. | Clustered/Creeping Cudweed |
| LTG | Carex appressa | Tall Sedge |
| MTG | Lepidosperma laterale | Variable Sword-sedge |
| MTG | Poa ensiformis | Sword Tussock-grass |
| MTG | Dianella tasmanica | Tasman Flax-lily |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Calochlaena dubia | Common Ground-fern |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Polystichum proliferum | Mother Shield-fern |
| GF | Blechnum minus | Soft Water-fern |
| TRF | Todea barbara | Austral King-fern |
| TRF | Dicksonia antarctica | Soft Tree-fern |
| SC | Pandorea pandorana | Wonga Vine |

**Recruitment:**

Continuous

###### Organic Litter:

40 % 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 Rubus fruticosus spp. agg. | Blackberry | high | high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 19: Riparian Shrubland Highlands – Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands – Northern Fall bioregion

EVC 20: Heathy Dry Forest

###### Description:

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 overstorey is a low, open eucalypt forest, poor in form to 20 m tall with an open crown cover. 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.

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

###### Tree Canopy Cover:

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 8 | 20% | MS |
| Small Shrub | 4 | 10% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 5 | 5% | MH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 6 | 10% | MTG |
| Ground Fern | 1 | 1% | GF |
| Scrambler or Climber | 1 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **70%** |  |

Ecological Vegetation Class bioregion benchmark

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| --- | --- |
| EVC 20: Heathy Dry Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Monotoca scoparia Prickly Broom-heath  MS Daviesia ulicifolia Gorse Bitter-pea  MS Daviesia leptophylla Narrow-leaf Bitter-pea  MS Persoonia confertiflora Cluster-flower Geebung  SS Hibbertia obtusifolia Grey Guinea-flower  SS Dillwynia phylicoides Small-leaf Parrot-pea  SS Tetratheca bauerifolia Heath Pink-bells  SS Hovea heterophylla Common Hovea  PS Platylobium formosum Handsome Flat-pea  PS Persoonia chamaepeuce Dwarf Geebung  PS Acrotriche serrulata Honey-pots  LH Senecio tenuiflorus Slender Fireweed  MH Gonocarpus tetragynus Common Raspwort  MH Poranthera microphylla Small Poranthera  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  LTG Lomandra longifolia Spiny-headed Mat-rush  MTG Joycea pallida Silvertop Wallaby-grass  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MTG Poa sieberiana Grey Tussock-grass  MTG Dianella revoluta s.l. Black-anther Flax-lily  GF Pteridium esculentum Austral Bracken  SC Cassytha pubescens s.s. Downy Dodder-laurel  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  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**

Highlands – Northern Fall 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 a low, 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** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | 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 Highlands – Northern Fall 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 Platylobium formosum Handsome Flat-pea  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**

Highlands – Northern Fall 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 a suite of fern species.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus dives  Eucalyptus macrorhyncha Eucalyptus goniocalyx s.l. | Broad-leaved Peppermint  Red Stringybark Bundy |

|  |  |  |  |
| --- | --- | --- | --- |
| **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 |
| Prostrate Shrub | 2 | 1% | PS |
| Large Herb | 4 | 5% | LH |
| Medium Herb | 12 | 25% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 8 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 1% | MNG |
| Ground Fern | 2 | 5% | GF |
| Scrambler or Climber | 2 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 22: Grassy Dry Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Cassinia aculeata Common Cassinia  MS Cassinia longifolia Shiny Cassinia  SS Pimelea linifolia Slender Rice-flower  SS Hibbertia obtusifolia Grey Guinea-flower  SS Hovea heterophylla Common Hovea  PS Acrotriche serrulata Honey-pots  PS Platylobium formosum Handsome Flat-pea  LH Wahlenbergia stricta Tall Bluebell  LH Senecio tenuiflorus Slender Fireweed  LH Senecio quadridentatus Cotton Fireweed  MH Epilobium billardierianum Variable Willow-herb  MH Hypericum gramineum Small St John's Wort  MH Gonocarpus tetragynus Common Raspwort  SH Poranthera microphylla Small Poranthera  SH Hydrocotyle laxiflora Stinking Pennywort  SH Dichondra repens Kidney-weed  SH Cymbonotus preissianus Austral Bear's-ear  MTG Joycea pallida Silvertop Wallaby-grass  MTG Poa sieberiana Grey Tussock-grass  MTG Lomandra filiformis Wattle Mat-rush  MTG Dianella revoluta s.l. Black-anther Flax-lily  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Echinopogon ovatus Common Hedgehog-grass  GF Cheilanthes austrotenuifolia Green Rock-fern  GF Pteridium esculentum Austral Bracken  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**  MH Hypochoeris radicata Cat's Ear high low  MH Centaurium erythraea Common Centaury high low  MH Anagallis arvensis Pimpernel high low MH Trifolium arvense var. arvense Hare's-foot Clover high low  MTG Briza minor Lesser Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MNG Holcus lanatus Yorkshire Fog high high  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**

Highlands – Northern Fall bioregion

EVC 23: Herb-rich Foothill Forest

###### Description:

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. A medium to tall open forest or woodland to 25 m tall with a small tree layer over a sparse to dense shrub layer. A high cover and diversity of herbs and grasses in the ground layer characterise this EVC.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus radiata s.l.  Eucalyptus dives Eucalyptus obliqua | Narrow-leaf Peppermint  Broad-leaved Peppermint Messmate 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 | 3 | 5% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 1% | LNG |
| Medium to Small Tufted Graminoid | 6 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 2 | 10% | GF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 23: Herb-rich Foothill Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Cassinia aculeata Common Cassinia  MS Coprosma quadrifida Prickly Currant-bush  MS Coprosma hirtella Rough Coprosma  MS Epacris impressa Common Heath  SS Tetratheca ciliata Pink-bells  SS Olearia erubescens Moth Daisy-bush  SS Hibbertia obtusifolia Grey Guinea-flower  SS Hovea heterophylla Common Hovea  PS Platylobium formosum Handsome Flat-pea  PS Acrotriche serrulata Honey-pots  PS Acrotriche prostrata Trailing Ground-berry  LH Senecio tenuiflorus Slender Fireweed  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Gonocarpus tetragynus Common Raspwort  MH Lagenophora stipitata Common Bottle-daisy  SH Hydrocotyle laxiflora Stinking Pennywort  SH Dichondra repens Kidney-weed  LTG Lomandra longifolia Spiny-headed Mat-rush  LNG Tetrarrhena juncea Forest Wire-grass  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MTG Poa sieberiana Grey Tussock-grass  MTG Dianella tasmanica Tasman Flax-lily  MTG Luzula meridionalis var. flaccida Common Woodrush  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Pteridium esculentum Austral Bracken  GF Polystichum proliferum Mother Shield-fern  SC Clematis aristata Mountain Clematis  SC Glycine clandestina Twining Glycine  SC Hardenbergia violacea Purple Coral-pea  **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Logs:**  20 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 Centaurium erythraea Common Centaury 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**

Highlands – Northern Fall 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** Medium Shrub | **#Spp**  7 | **%Cover**  25% | **LF code**  MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 5 | 5% | MH |
| Small or Prostrate Herb | 2 | 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 | Hovea pannosa s.l. | Mountain Beauty |
| MS | Brachyloma daphnoides | Daphne Heath |
| MS | Persoonia confertiflora | Cluster-flower Geebung |
| 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 |
| PS | Persoonia chamaepeuce | Dwarf Geebung |
| 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

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 28: Rocky Outcrop Shrubland Highlands – Northern Fall bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low MNG Vulpia myuros Rat's-tail Fescue 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**

Highlands – Northern Fall bioregion

EVC 29: Damp Forest

###### Description:

Grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects, from sea level to montane elevations. Dominated by a tall eucalypt tree layer to 30 m tall over a medium to tall dense shrub layer of broad- leaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus obliqua  Eucalyptus radiata s.l. | Messmate Stringybark  Small-leaved Peppermint |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 5 | 30% | T |
| Medium Shrub | 6 | 15% | MS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 3 | 15% | GF |
| Tree Fern | 1 | 5% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Pomaderris aspera | **Common Name**  Hazel Pomaderris |
| T | Olearia argophylla | Musk Daisy-bush |
| T | Acacia dealbata | Silver Wattle |
| T | Lomatia fraseri | Tree Lomatia |
| MS | Coprosma quadrifida | Prickly Currant-bush |
| MS | Cassinia aculeata | Common Cassinia |
| MS | Pimelea axiflora | Bootlace Bush |
| MS | Olearia phlogopappa | Dusty Daisy-bush |
| LH | Mentha laxiflora | Forest Mint |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Geranium potentilloides | Cinquefoil Cranesbill |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| SH | Dichondra repens | Kidney-weed |
| SH | Leptinella filicula | Mountain Cotula |
| LNG | Tetrarrhena juncea | Forest Wire-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 | Calochlaena dubia | Common Ground-fern |
| TRF | Cyathea australis | Rough Tree-fern |
| TRF | Dicksonia antarctica | Soft Tree-fern |
| SC | Clematis aristata | Mountain Clematis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 29: Damp Forest  Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  30 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**

Highlands – Northern Fall bioregion

EVC 30: Wet Forest

###### Description:

Grows on fertile, well-drained loamy soils on a range of geologies and elevation levels. It is largely restricted to protected sites in gullies and on southern aspects of hills and mountains where rainfall is high and cloud cover at ground level is frequent. Characterised by a tall eucalypt overstorey to 30 m tall with scattered understorey trees over a tall broad-leaved shrubby understorey and a moist, shaded, fern-rich ground layer that is usually dominated by tree-ferns.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus regnans | Mountain Ash |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 4 | 30% | T |
| Medium Shrub | 6 | 20% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 5 | 10% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Large Non-tufted Graminoid | 1 | 10% | LNG |
| Medium to Small Tufted Graminoid | 1 | 5% | MTG |
| Ground Fern | 4 | 20% | GF |
| Tree Fern | 2 | 10% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| T | Pomaderris aspera | Hazel Pomaderris |
| T | Olearia argophylla | Musk Daisy-bush |
| MS | Coprosma quadrifida | Prickly Currant-bush |
| MS | Olearia phlogopappa | Dusty Daisy-bush |
| MS | Cassinia aculeata | Common Cassinia |
| MS | Correa lawrenceana | Mountain Correa |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| MH | Sambucus gaudichaudiana | White Elderberry |
| MH | Geranium potentilloides | Cinquefoil Cranesbill |
| SH | Leptostigma reptans | Dwarf Nertera |
| LTG | Lepidosperma elatius | Tall Sword-sedge |
| LNG | Tetrarrhena juncea | Forest Wire-grass |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Polystichum proliferum | Mother Shield-fern |
| GF | Histiopteris incisa | Bat's Wing Fern |
| GF | Blechnum wattsii | Hard Water-fern |
| TRF | Dicksonia antarctica | Soft Tree-fern |
| TRF | Cyathea australis | Rough Tree-fern |
| SC | Clematis aristata | Mountain Clematis |
| SC | Billardiera longiflora var. longiflora | Purple Apple-berry |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 30: Wet Forest  Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  30 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**

Highlands – Northern Fall bioregion

EVC 31: Cool Temperate Rainforest

###### Description:

Closed non-eucalypt forest to 25 m tall. Occurs in high rainfall areas protected from fire within Wet Forest. The understorey characterised by tree ferns and a rich epiphytic flora. The ground layer is dominated by a diversity of ground ferns.

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| **Large trees:** |  | |
| **Species**  Nothofagus/Atherosperma | **DBH(cm)**  70 cm | **#/ha**  20 / ha |

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 50% | Nothofagus cunninghamii  Atherosperma moschatum | Myrtle Beech  Southern Sassafras |

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

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Pittosporum bicolor | **Common Name**  Banyalla |
| MS | Tasmannia lanceolata | Mountain Pepper |
| MS | Hedycarya angustifolia | Austral Mulberry |
| MS | Coprosma quadrifida | Prickly Currant-bush |
| MS | Prostanthera lasianthos | Victorian Christmas-bush |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Australina pusilla ssp. muelleri | Shade Nettle |
| MH | Sambucus gaudichaudiana | White Elderberry |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| LTG | Carex appressa | Tall Sedge |
| LNG | Tetrarrhena juncea | Forest Wire-grass |
| MTG | Libertia pulchella | Pretty Grass-flag |
| MNG | Uncinia tenella | Delicate Hook-sedge |
| GF | Blechnum wattsii | Hard Water-fern |
| GF | Grammitis billardierei | Common Finger-fern |
| GF | Polystichum proliferum | Mother Shield-fern |
| GF | Asplenium bulbiferum ssp. gracillimum | Mother Spleenwort |
| TRF | Dicksonia antarctica | Soft Tree-fern |
| TRF | Cyathea australis | Rough Tree-fern |
| EP | Crepidomanes venosum | Veined Bristle-fern |
| EP | Microsorum pustulatum ssp. pustulatum | Kangaroo Fern |
| EP | Hymenophyllum australe | Austral Filmy Fern |
| EP | Hymenophyllum flabellatum | Shiny Filmy Fern |
| SC | Clematis aristata | Mountain Clematis |
| SC | Parsonsia brownii | Twining Silkpod |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 31: Cool Temperate Rainforest Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  There are no consistent weeds in this EVC.  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**

Highlands – Northern Fall bioregion

EVC 35: Tableland Damp Forest

###### Description:

Tall eucalypt forest to 30 m tall with an understorey dominated by a tall, diverse shrub layer of broad-leaved shrubs and heaths with sometimes a scattering of tree-ferns. The ground layer is dominated by a variety of herbs and graminoids. Occurs on topographically protected south-facing slopes and occasionally in gully heads on northern or western slopes in low relief montane areas.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus delegatensis ssp. delegatensis | Alpine Ash |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 3 | 20% | T |
| Medium Shrub | 7 | 20% | MS |
| Small Shrub | 2 | 10% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 2 | 15% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 1% | LNG |
| Medium to Small Tufted Graminoid | 3 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 5% | MNG |
| Ground Fern | 2 | 5% | GF |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| T | Acacia obliquinervia | Mountain Hickory Wattle |
| MS | Polyscias sambucifolia | Elderberry Panax |
| MS | Coprosma hirtella | Rough Coprosma |
| MS | Olearia phlogopappa | Dusty Daisy-bush |
| MS | Cassinia aculeata | Common Cassinia |
| SS | Leucopogon hookeri | Mountain Beard-heath |
| LH | Derwentia derwentiana | Derwent Speedwell |
| LH | Senecio linearifolius | Fireweed Groundsel |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Lagenophora stipitata | Common Bottle-daisy |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| MH | Gonocarpus tetragynus | Common Raspwort |
| SH | Leptinella filicula | Mountain Cotula |
| MTG | Dianella tasmanica | Tasman Flax-lily |
| MTG | Stylidium graminifolium s.l. | Grass Trigger-plant |
| MTG | Poa ensiformis | Sword Tussock-grass |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Polystichum proliferum | Mother Shield-fern |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 35: Tableland Damp Forest Highlands - Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  30 m/0.1 ha.  **Weediness:**  There are no consistent weeds in this EVC.  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**

Highlands – Northern Fall bioregion

EVC 36: Montane Dry Woodland

###### Description:

Occurs on dry and exposed mid to upper slopes at montane elevations, often extending onto ridges in high rainfall areas. Effective rainfall may be enhanced by cold air drainage, low cloud cover and in some cases, persistent snow cover. Open forest to open woodland to 15 m tall, according to altitude, precipitation and frequency of fire. The shrubby understorey is an unusual combination of species, which tolerate exposed montane conditions and species that enjoy the increased moisture available from cloud and fog drip

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus dives  Eucalyptus rubida Eucalyptus radiata | Broad-leaved Peppermint  Candlebark  Narrow-leaved Peppermint |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 20% | T |
| Medium Shrub | 5 | 20% | MS |
| Small Shrub | 2 | 5% | SS |
| Prostrate Shrub | 2 | 5% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 9 | 15% | MH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 6 | 15% | MTG |
| Ground Fern | 1 | 5% | GF |
| Scrambler or Climber | 2 | 1% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 36: Montane Dry Woodland Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Acacia obliquinervia Mountain Hickory Wattle  MS Coprosma hirtella Rough Coprosma  MS Polyscias sambucifolia Elderberry Panax  MS Pultenaea juniperina s.l. Prickly Bush-pea  MS Cassinia aculeata Common Cassinia  SS Olearia erubescens Moth Daisy-bush  SS Hibbertia obtusifolia Grey Guinea-flower  SS Tetratheca ciliata Pink-bells  PS Platylobium formosum Handsome Flat-pea  PS Persoonia chamaepeuce Dwarf Geebung  PS Acrotriche serrulata Honey-pots  LH Derwentia derwentiana Derwent Speedwell  LH Senecio tenuiflorus Slender Fireweed  LH Wahlenbergia stricta Tall Bluebell  LH Arthropodium milleflorum s.l. Pale Vanilla-lily  MH Stellaria pungens Prickly Starwort  MH Gonocarpus tetragynus Common Raspwort  MH Asperula scoparia Prickly Woodruff  MH Viola betonicifolia ssp. betonicifolia Showy Violet  LTG Lomandra longifolia Spiny-headed Mat-rush  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MTG Dianella tasmanica Tasman Flax-lily  MTG Poa sieberiana Grey Tussock-grass  MTG Poa labillardierei Common Tussock-grass  MNG Luzula campestris spp. agg. Field Woodrush  GF Pteridium esculentum Austral Bracken  GF Polystichum proliferum Mother Shield-fern  SC Clematis aristata Mountain Clematis  **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  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**

Highlands – Northern Fall bioregion

EVC 37: Montane Grassy Woodland

###### Description:

Occurs in montane elevations on moderately fertile soils on all aspects. An open eucalypt woodland to 10 m tall, sometimes with a secondary tree layer. The understorey often consists of a sparse shrub layer which can be variable in height. The EVC is characterised by its grassy ground cover together with a variety of other graminoids and herbs.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus pauciflora  Eucalyptus dives Eucalyptus rubida | Snow Gum  Broad-leaved Peppermint Candlebark |

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

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 37: Montane Grassy Woodland Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Cassinia aculeata Common Cassinia  MS Pultenaea juniperina s.l. Prickly Bush-pea  MS Pimelea linifolia Slender Rice-flower  MS Brachyloma daphnoides Daphne Heath  SS Hibbertia obtusifolia Grey Guinea-flower  SS Olearia erubescens Moth Daisy-bush  SS Leucopogon hookeri Mountain Beard-heath  PS Platylobium formosum Handsome Flat-pea  PS Acrotriche serrulata Honey-pots  LH Arthropodium milleflorum s.l. Pale Vanilla-lily  LH Wahlenbergia stricta Tall Bluebell  MH Gonocarpus tetragynus Common Raspwort  MH Viola betonicifolia ssp. betonicifolia Showy Violet  MH Stellaria pungens Prickly Starwort  SH Chiloglottis gunnii s.l. Common Bird-orchid  SH Galium ciliare Hairy Bedstraw  SH Leptinella filicula Mountain Cotula  LTG Lomandra longifolia Spiny-headed Mat-rush  LTG Deyeuxia quadriseta Reed Bent-grass  MTG Dianella tasmanica Tasman Flax-lily  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MTG Themeda triandra Kangaroo Grass  MTG Luzula meridionalis var. flaccida Common Woodrush  GF Polystichum proliferum Mother Shield-fern  GF Pteridium esculentum Austral Bracken  SC Glycine clandestina Twining Glycine  **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 Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low  MH Centaurium erythraea Common Centaury high low  MH Prunella vulgaris Self-heal high high MH Taraxacum officinale spp. agg. Garden Dandelion high low  SH Trifolium repens var. repens White Clover high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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

Highlands – Northern Fall bioregion

EVC 38: Montane Damp Forest

###### Description:

Grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects at montane elevations. Dominated by a tall eucalypt tree layer to 30 m tall over a medium to tall dense shrub layer of broad-leaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus delegatensis ssp. delegatensis  Eucalyptus radiata s.l. Eucalyptus rubida | Alpine Ash  Narrow-leaf Peppermint Candlebark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 3 | 15% | T |
| Medium Shrub | 7 | 20% | MS |
| Small Shrub | 2 | 1% | SS |
| Prostrate Shrub | 1 | 5% | PS |
| Large Herb | 4 | 5% | LH |
| Medium Herb | 12 | 20% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 6 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 5% | MNG |
| Ground Fern | 2 | 15% | GF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 38: Montane Damp Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Cassinia aculeata Common Cassinia  MS Coprosma hirtella Rough Coprosma  MS Coprosma quadrifida Prickly Currant-bush  MS Polyscias sambucifolia Elderberry Panax  SS Olearia erubescens Moth Daisy-bush  PS Platylobium formosum Handsome Flat-pea  LH Derwentia derwentiana Derwent Speedwell  LH Senecio linearifolius Fireweed Groundsel  LH Picris angustifolia Native Picris  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Stellaria pungens Prickly Starwort  MH Acaena novae-zelandiae Bidgee-widgee  MH Lagenophora stipitata Common Bottle-daisy  SH Chiloglottis gunnii s.l. Common Bird-orchid  SH Leptinella filicula Mountain Cotula  SH Hydrocotyle laxiflora Stinking Pennywort  LTG Lomandra longifolia Spiny-headed Mat-rush  MTG Dianella tasmanica Tasman Flax-lily  MTG Poa ensiformis Sword Tussock-grass  MTG Poa sieberiana Grey Tussock-grass  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Deyeuxia rodwayi Tasman Bent-grass  GF Pteridium esculentum Austral Bracken  GF Polystichum proliferum Mother Shield-fern  SC Clematis aristata Mountain Clematis  **Recruitment:**  Continuous.  **Organic Litter:**  80 % cover  **Logs:**  30 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  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**

Highlands – Northern Fall bioregion

EVC 39: Montane Wet Forest

###### Description:

Grows on the most sheltered wet sites such as gully heads and south facing slopes at montane elevations in high rainfall areas. Soils are deep, fertile, well-drained and structureless and although well-drained, may remain saturated for long periods. The overstorey forms a tall open eucalypt forest to 30 m tall over a secondary tree layer with occasional tall shrubs which provide shade and protection for a fern-rich ground layer. Scattered herbs occur in gaps in the ground layer.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus regnans  Eucalyptus nitens | Mountain Ash  Shining Gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 5 | 30% | T |
| Medium Shrub | 5 | 15% | MS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb | 1 | 1% | SH |
| Large Non-tufted Graminoid | 1 | 15% | LNG |
| Medium to Small Tufted Graminoid | 2 | 5% | MTG |
| Ground Fern | 3 | 20% | GF |
| Tree Fern | 2 | 5% | TRF |
| Scrambler or Climber | 2 | 1% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 39: Montane Wet Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Lomatia fraseri Tree Lomatia  MS Cassinia aculeata Common Cassinia  MS Polyscias sambucifolia Elderberry Panax  MS Olearia phlogopappa Dusty Daisy-bush  MS Prostanthera lasianthos Victorian Christmas-bush  LH Mentha laxiflora Forest Mint  LH Senecio velleioides Forest Groundsel  MH Stellaria flaccida Forest Starwort  MH Hydrocotyle hirta Hairy Pennywort  MH Geranium potentilloides Cinquefoil Cranesbill  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  SH Leptinella filicula Mountain Cotula  SH Oxalis exilis Shady Wood-sorrel  SH Asperula euryphylla var. euryphylla Broad-leaf Woodruff  SH Oxalis corniculata s.l. Yellow Wood-sorrel  LTG Dryopoa dives Giant Mountain-grass  LNG Tetrarrhena juncea Forest Wire-grass  MTG Dianella tasmanica Tasman Flax-lily  MTG Poa ensiformis Sword Tussock-grass  MTG Poa australis spp. agg. Tussock Grass  GF Polystichum proliferum Mother Shield-fern  GF Pteridium esculentum Austral Bracken  GF Histiopteris incisa Bat's Wing Fern  TRF Dicksonia antarctica Soft Tree-fern  TRF Cyathea australis Rough Tree-fern  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**  MH Hypochoeris radicata Cat's Ear high low  Published by the Victorian Government Department of Sustainability and Environment September 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**

Highlands – Northern Fall bioregion

EVC 40: Montane Riparian Woodland

###### Description:

Associated with the peat-rich flats of perennial, meandering streams which flow through Montane Dry Woodland at montane elevations. Characterised by a low open woodland to 10 m tall with a dense riparian shrub layer lining the smaller creeks but on the larger streams may be largely non-treed. The ground layer contains a dense sward of grasses, herbs and sedges often associated with creeks or river margins.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  60 cm | **#/ha**  15 / ha |

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus rubida  Eucalyptus camphora ssp. humeana Eucalyptus stellulata | Candlebark  Mountain Swamp-gum Black Sallee |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 10% | T |
| Medium Shrub | 3 | 10% | MS |
| Small Shrub | 3 | 5% | SS |
| Large Herb | 4 | 10% | LH |
| Medium Herb | 12 | 20% | MH |
| Small or Prostrate Herb | 4 | 10% | SH |
| Large Tufted Graminoid | 3 | 5% | LTG |
| Large Non-tufted Graminoid | 1 | 1% | LNG |
| Medium to Small Tufted Graminoid | 6 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 5% | MNG |
| Ground Fern | 2 | 5% | GF |
| Bryophytes/Lichens | na | 20% | BL |

**Recruitment:**

Continuous

###### Organic Litter:

40 % cover

###### Logs:

15 m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 40: Montane Riparian Woodland Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Leptospermum grandifolium Mountain Tea-tree  MS Baeckea gunniana Alpine Baeckea  MS Leptospermum myrtifolium Myrtle Tea-tree  MS Pimelea axiflora Bootlace Bush  SS Rubus parvifolius Small-leaf Bramble  SS Hovea heterophylla Common Hovea  SS Leucopogon hookeri Mountain Beard-heath  SS Epacris microphylla s.l. Coral Heath  LH Villarsia reniformis Running Marsh-flower  LH Veronica gracilis Slender Speedwell  LH Senecio hispidulus Rough Fireweed  MH Asperula pusilla Alpine Woodruff  MH Asperula gunnii Mountain Woodruff  MH Geranium potentilloides Cinquefoil Cranesbill  SH Dichondra repens Kidney-weed  SH Ranunculus amphitrichus Small River Buttercup  SH r Gratiola nana Matted Brooklime  SH Scleranthus biflorus s.l. Twin-flower Knawel  LTG Deyeuxia quadriseta Reed Bent-grass  LTG r Scirpus polystachyus Large-head Club-sedge  LTG Juncus gregiflorus Green Rush  LTG Carex longebrachiata Bergalia Tussock  MTG Carex gaudichaudiana Fen Sedge  MTG Lachnagrostis filiformis Common Blown-grass  MTG Lachnagrostis aemula s.l. Leafy Blown-grass  MTG Carex blakei Alpine Sedge  MNG Isolepis crassiuscula Alpine Club-sedge  MNG Baumea gunnii Slender Twig-sedge  MNG Baloskion australe Mountain Cord-rush  MNG Luzula campestris spp. agg. Field Woodrush  GF Polystichum proliferum Mother Shield-fern  GF Blechnum minus Soft Water-fern  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Rosa rubiginosa Sweet Briar low high  LH Cirsium vulgare Spear Thistle high high  LH Rumex crispus Curled Dock high high  MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high high  MH Trifolium dubium Suckling Clover high low MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low MH Taraxacum officinale spp. agg. Garden Dandelion high low  MH Batrachium trichophyllum Water Fennel high high  MH Acetosella vulgaris Sheep Sorrel high high  SH Trifolium repens var. repens White Clover high high  LNG Holcus lanatus Yorkshire Fog high high MTG Anthoxanthum odoratum Sweet Vernal-grass high high  MNG Aira caryophyllea Silvery Hair-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**

Highlands – Northern Fall bioregion

EVC 41: Montane Riparian Thicket

###### Description:

Closed shrubland to 8 m tall, often occurring as a narrow, linear strip along montane streams. The overstorey tree stratum is usually absent (although emergents may occur), often occurring only as overhang from adjacent Montane Damp Forest.

Occurs in montane and sub-alpine areas, often within Montane Damp Forest along drainage lines, streams with gentle gradients

and in soaks at the heads of gullies on south-facing aspects. The waterlogged soils are colluviums or alluviums rich in organic matter. The understorey consists of shade-tolerant shrubs and ferns. Sedges, grasses and herbs form a sparse but diverse ground layer.

###### Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 50% | Leptospermum grandifolium  Acacia melanoxylon Acacia dealbata | Mountain Tea-tree  Blackwood Silver Wattle |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** Medium Shrub | **#Spp**  4 | **%Cover**  10% | **LF code**  MS |
| Medium Herb | 4 | 5% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 3 | 5% | MTG |
| Ground Fern | 5 | 35% | GF |
| Tree Fern | 1 | 1% | TRF |
| Bryophytes/Lichens | na | 20% | BL |
| **Total understorey projective foliage cover** |  | **75%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Coprosma quadrifida | **Common Name**  Prickly Currant-bush |
| MS | Tasmannia lanceolata | Mountain Pepper |
| MS | Prostanthera lasianthos | Victorian Christmas-bush |
| MS | Epacris breviflora | Drumstick Heath |
| LH | Epilobium gunnianum | Gunn's Willow-herb |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| MH | Gratiola peruviana | Austral Brooklime |
| MH | Australina pusilla ssp. muelleri | Shade Nettle |
| SH | Leptinella filicula | Mountain Cotula |
| LTG | Carex appressa | Tall Sedge |
| LTG | Deyeuxia brachyathera | Short Bent-grass |
| MTG | Dianella tasmanica | Tasman Flax-lily |
| MTG | Poa labillardierei var. labillardierei | Common Tussock-grass |
| GF | Blechnum nudum | Fishbone Water-fern |
| GF | Polystichum proliferum | Mother Shield-fern |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Blechnum wattsii | Hard Water-fern |
| TRF | Todea barbara | Austral King-fern |
| SC | Clematis aristata | Mountain Clematis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 41: Montane Riparian Thicket Highlands – Northern Fall 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**  MH Prunella vulgaris Self-heal 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**

Highlands – Northern Fall bioregion

EVC 43: Sub-alpine Woodland

###### Description:

Grows on a wide range of geologies and aspects, in the higher altitudinal levels above 1200 m. Rainfall is relatively high and snow may persist for long periods over winter. Soils are generally skeletal sandy clay loams with a rich humus topsoil layer. A low, open woodland to 10 m tall dominated by Snow Gum Eucalyptus pauciflora, with the understorey variously consisting of a rich suite of grasses and herbs, or a dense layer of woody shrubs, depending on soil fertility.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus pauciflora  Eucalyptus pauciflora ssp. niphophila | Snow Gum  Alpine Sally |

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

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS | Coprosma hirtella | Rough Coprosma |
| MS | Lomatia myricoides | River Lomatia |
| MS | Polyscias sambucifolia | Elderberry Panax |
| MS | Pultenaea juniperina s.l. | Prickly Bush-pea |
| PS | Platylobium formosum | Handsome Flat-pea |
| LH | Lobelia gibbosa s.s. | Tall Lobelia |
| LH | Derwentia derwentiana | Derwent Speedwell |
| MH | Lagenophora stipitata | Common Bottle-daisy |
| MH | Viola betonicifolia ssp. betonicifolia | Showy Violet |
| MH | Stellaria pungens | Prickly Starwort |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| SH | Gonocarpus montanus | Mat Raspwort |
| SH | Leptinella filicula | Mountain Cotula |
| LTG | Lomandra longifolia ssp. exilis | Cluster-headed Mat-rush |
| LTG | Deyeuxia frigida | Forest Bent-grass |
| MTG | Poa sieberiana | Grey Tussock-grass |
| MTG | Luzula meridionalis var. flaccida | Common Woodrush |
| MTG | Poa hothamensis var. hothamensis | Ledge Grass |
| MTG | Poa sieberiana var. sieberiana | Grey Tussock-grass |
| GF | Pteridium esculentum | Austral Bracken |
| SC | Clematis aristata | Mountain Clematis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 43: Sub-alpine Woodland Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % 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 MTG Anthoxanthum odoratum Sweet Vernal-grass high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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

Highlands – Northern Fall bioregion

EVC 45: Shrubby Foothill Forest

###### Description:

Occurs on ridges and exposed slopes in association moister forests on moderately fertile soils and at a range of elevations. The overstorey is a medium eucalypt forest to 25 m tall over an understorey characterised by a distinctive middle strata dominated by a diversity of narrow-leaved shrubs and a paucity of ferns, graminoids and herbs in the ground stratum.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 30% | Eucalyptus macrorhyncha  Eucalyptus ovata Eucalyptus obliqua  Eucalyptus radiata ssp. radiata | Red Stringybark  Swamp Gum Messmate Stringybark  Narrow-leaf Peppermint |

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

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Leptospermum scoparium | **Common Name**  Manuka |
| MS | Coprosma quadrifida | Prickly Currant-bush |
| MS | Pultenaea juniperina s.l. | Prickly Bush-pea |
| MS | Epacris impressa | Common Heath |
| SS | Tetratheca ciliata | Pink-bells |
| PS | Acrotriche serrulata | Honey-pots |
| PS | Acrotriche prostrata | Trailing Ground-berry |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| MH | Viola hederacea sensu Entwisle (1996) | Ivy-leaf Violet |
| MH | Gonocarpus tetragynus | Common Raspwort |
| LTG | Gahnia sieberiana | Red-fruit Saw-sedge |
| LNG | Tetrarrhena juncea | Forest Wire-grass |
| MTG | Poa ensiformis | Sword Tussock-grass |
| MNG | Poa tenera | Slender Tussock-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Calochlaena dubia | Common Ground-fern |
| GF | Blechnum nudum | Fishbone Water-fern |
| SC | Clematis aristata | Mountain Clematis |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 45: Shrubby Foothill Forest Highlands – Northern Fall bioregion | |
|  | **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**  SS Rubus sp. aff. armeniacus Blackberry 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**

Highlands – Northern Fall bioregion

EVC 47: Valley Grassy Forest

###### Description:

Valley Grassy Forest occurs under moderate rainfall regimes of 700-800 mm per annum on fertile well-drained colluvial or alluvial soils on gently undulating lower slopes and valley floors. Open forest to 25 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 DBH(cm) #/ha**

Eucalyptus spp. 70 cm 20 / ha

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus rubida  Eucalyptus radiata s.l.  Eucalyptus melliodora Eucalyptus obliqua | Candlebark  Narrow-leaf Peppermint Yellow Box  Messmate Stringybark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 6 | 10% | MS |
| Small Shrub | 5 | 5% | SS |
| Prostrate Shrub | 3 | 5% | PS |
| Large Herb | 3 | 1% | LH |
| Medium Herb | 16 | 20% | MH |
| Small or Prostrate Herb | 4 | 5% | SH |
| Large Tufted Graminoid | 3 | 5% | LTG |
| Medium to Small Tufted Graminoid | 12 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 10% | MNG |
| Ground Fern | 1 | 5% | GF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

**Recruitment:**

Continuous

###### Organic Litter:

40 % cover

###### Logs:

20 m/0.1 ha.

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 47: Valley Grassy Forest Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Acacia melanoxylon Blackwood  MS Cassinia aculeata Common Cassinia  MS Coprosma quadrifida Prickly Currant-bush  MS Leptospermum continentale Prickly Tea-tree  SS Hovea heterophylla Common Hovea  SS Hibbertia obtusifolia Grey Guinea-flower  SS Tetratheca pilosa Hairy Pink-bells  SS Tetratheca ciliata Pink-bells  PS Acrotriche serrulata Honey-pots  PS Platylobium formosum Handsome Flat-pea  PS Acrotriche prostrata Trailing Ground-berry  PS Boronia nana var. hyssopifolia Dwarf Boronia  LH Senecio quadridentatus Cotton Fireweed  LH Senecio tenuiflorus Slender Fireweed  MH Ajuga australis Austral Bugle  MH Euchiton collinus s.s. Creeping Cudweed  MH Viola hederacea sensu Willis (1972) Ivy-leaf Violet  MH Gonocarpus tetragynus Common Raspwort  SH Hydrocotyle laxiflora Stinking Pennywort  SH Dichondra repens Kidney-weed  SH Desmodium gunnii Southern Tick-trefoil  SH Galium propinquum Maori Bedstraw  LTG Deyeuxia quadriseta Reed Bent-grass  LTG Lomandra longifolia ssp. exilis Cluster-headed Mat-rush  LTG Poa labillardierei Common Tussock-grass  MTG Themeda triandra Kangaroo Grass  MTG Poa sieberiana var. sieberiana Grey Tussock-grass  MTG Luzula meridionalis var. flaccida Common Woodrush  MTG Stylidium graminifolium s.l. Grass Trigger-plant  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Echinopogon ovatus Common Hedgehog-grass  GF Pteridium esculentum Austral Bracken  SC Glycine clandestina Twining Glycine  SC Hardenbergia violacea Purple Coral-pea  **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 LH Hypericum perforatum St John's Wort high high  MH Hypochoeris radicata Cat's Ear high low  MH Centaurium erythraea Common Centaury high low MH Anagallis arvensis Pimpernel high low  MH Trifolium dubium Suckling Clover high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Briza minor Lesser 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 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**

Highlands – Northern Fall bioregion

EVC 48: Heathy Woodland

###### Description:

Spans a variety of geologies but is generally associated with nutrient-poor soils including deep uniform sands (aeolian or outwash) and Tertiary sand/clay which has been altered to form quartzite gravel. Eucalypt-dominated low woodland to 10 m tall lacking a secondary tree layer and generally supporting a diverse array of narrow or ericoid-leaved shrubs except where frequent fire has reduced this to a dense cover of bracken. Geophytes and annuals can be quite common but the ground cover is normally fairly sparse.

|  |  |  |
| --- | --- | --- |
| **Large trees:** |  | |
| **Species**  Eucalyptus spp. | **DBH(cm)**  60 cm | **#/ha**  15 / ha |

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus dives | Broad-leaved Peppermint |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Medium Shrub | 7 | 40% | MS |
| Small Shrub | 6 | 20% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Medium Herb | 4 | 5% | MH |
| Large Tufted Graminoid | 2 | 10% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 4 | 10% | MTG |
| Ground Fern | 1 | 1% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 48: Heathy Woodland Highlands - Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  MS Leptospermum continentale Prickly Tea-tree  MS Monotoca scoparia Prickly Broom-heath  MS Epacris impressa Common Heath  MS Banksia marginata Silver Banksia  SS Leucopogon virgatus Common Beard-heath  SS Hovea heterophylla Common Hovea  SS Dillwynia sericea s.l. Showy Parrot-pea  MH Gonocarpus tetragynus Common Raspwort  MH Drosera peltata ssp. auriculata Tall Sundew  MH Hydrocotyle hirta Hairy Pennywort  LTG Lomandra longifolia Spiny-headed Mat-rush  LNG Tetrarrhena juncea Forest Wire-grass  MTG Poa sieberiana Grey Tussock-grass  GF Pteridium esculentum Austral Bracken  SC Cassytha glabella Slender Dodder-laurel  **Recruitment:**  Episodic/Fire. Desirable period between disturbances is 20 years.  **Organic Litter:**  40 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MTG Briza maxima Large Quaking-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**

Highlands – Northern Fall bioregion

EVC 55: Plains Grassy Woodland

###### Description:

An open, eucalypt woodland to 15 m tall. Occupies on 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: Plains Grassy Woodland Highlands – Northern Fall 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 high  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 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**

Highlands – Northern Fall bioregion

EVC 56: Floodplain Riparian Woodland

###### Description:

An open woodland to 20 m tall usually dominated by Red Gum Eucalyptus spp. 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** |
| 15% | Eucalyptus camaldulensis | River Red-gum |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 6 | 15% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 4 | 10% | LH |
| Medium Herb | 4 | 10% | MH |
| Small or Prostrate Herb | 1 | 1% | SH |
| Large Tufted Graminoid | 3 | 10% | LTG |
| Large Non-tufted Graminoid | 2 | 10% | LNG |
| Medium to Small Tufted Graminoid | 3 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 10% | MNG |
| Ground Fern | 1 | 5% | GF |
| 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 | Hymenanthera dentata s.l. | Tree Violet |
| MS | Cassinia aculeata | Common Cassinia |
| MS | Kunzea ericoides | Burgan |
| SS | Rubus parvifolius | Small-leaf Bramble |
| MH | Acaena novae-zelandiae | Bidgee-widgee |
| SH | Hydrocotyle laxiflora | Stinking Pennywort |
| LTG | Carex appressa | Tall Sedge |
| LTG | Poa labillardierei | Common Tussock-grass |
| LNG | Phragmites australis | Common Reed |
| MTG | Juncus amabilis | Hollow Rush |
| MTG | Cyperus lhotskyanus | Creeping Flat-sedge |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| MNG | Distichlis distichophylla | Australian Salt-grass |
| GF | Pteridium esculentum | Austral Bracken |
| EP | Muellerina eucalyptoides | Creeping Mistletoe |

**Recruitment:**

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

###### Organic Litter:

40 % cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 56: Floodplain Riparian Woodland Highlands – Northern Fall bioregion | |
|  | **Logs:**  30 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Pinus radiata Radiata Pine low high  T Crataegus monogyna Hawthorn low high  MS Rosa rubiginosa Sweet Briar low high  MS Ulex europaeus Gorse low high  MS Rubus fruticosus spp. agg. Blackberry high high  LH Foeniculum vulgare Fennel high high LH Verbena bonariensis s.l. Purple-top Verbena high high  LH Cirsium vulgare Spear Thistle high high  LH Sonchus oleraceus Common Sow-thistle high low  LH Plantago lanceolata Ribwort high low  LH Rumex crispus Curled Dock high low  LH Sonchus asper s.l. Rough Sow-thistle high low LH Solanum nigrum sensu Willis (1972) Black Nightshade high low  LH Silybum marianum Variegated Thistle high high  LH Rorippa palustris Marsh Yellow-cress high high  MH Hypochoeris radicata Cat's Ear high low  MH Acetosella vulgaris Sheep Sorrel high high  MH Trifolium dubium Suckling Clover high low  MH Trifolium subterraneum Subterranean Clover high low MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low  MH Prunella vulgaris Self-heal high low  MH Anagallis arvensis Pimpernel high low  SH Trifolium repens var. repens White Clover high low SH Polygonum aviculare s.l. Prostrate Knotweed high low  SH Callitriche stagnalis Common Starwort high high  LTG Phalaris aquatica Toowoomba Canary-grass high high  LNG Holcus lanatus Yorkshire Fog high high  MTG Lolium multiflorum Italian Rye-grass high low  MTG Cyperus eragrostis Drain Flat-sedge high high MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low  MTG Lolium perenne Perennial Rye-grass high high  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Critesion murinum Barley-grass high low  MTG Poa annua Annual Meadow-grass high low  MTG Bromus diandrus Great Brome high low  MTG Bromus catharticus Prairie Grass high low  MTG Dactylis glomerata Cocksfoot high high  MNG Paspalum distichum Water Couch high high  SC Galium aparine Cleavers high low  SC Vicia sativa Common Vetch 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**

Highlands – Northern Fall bioregion

EVC 59: Riparian Thicket

###### Description:

Dense thickets of Woolly Tea-tree Leptospermum lanigerum to 6 m tall with occasional emergent eucalypts that occur on broad beds of small streams or on regular flooded terraces of large streams and rivers. Ground layer is dominated by a number of ferns, tree-ferns and sedges.

###### Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 50% | Leptospermum lanigerum | Woolly Tea-tree |

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

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Epacris impressa | **Common Name**  Common Heath |
| MS | Cassinia aculeata | Common Cassinia |
| MS | Ozothamnus rosmarinifolius | Rosemary Everlasting |
| MS | Kunzea ericoides | Burgan |
| SS | Dampiera stricta | Blue Dampiera |
| SS | Amperea xiphoclada var. xiphoclada | Broom Spurge |
| SS | Acacia brownii | Heath Wattle |
| PS | Acrotriche prostrata | Trailing Ground-berry |
| LH | Senecio minimus | Shrubby Fireweed |
| LH | Epilobium pallidiflorum | Showy Willow-herb |
| MH | Viola hederacea sensu Willis (1972) | Ivy-leaf Violet |
| MH | Gonocarpus tetragynus | Common Raspwort |
| LTG | Cyperus lucidus | Leafy Flat-sedge |
| LTG | Carex appressa | Tall Sedge |
| LNG | Tetrarrhena juncea | Forest Wire-grass |
| LNG | Gahnia radula | Thatch Saw-sedge |
| MTG | Lomandra filiformis | Wattle Mat-rush |
| MTG | Lepidosperma filiforme | Common Rapier-sedge |
| MNG | Poa tenera | Slender Tussock-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| MNG | Baumea tetragona | Square Twig-sedge |
| GF | Gleichenia dicarpa | Pouched Coral-fern |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Blechnum minus | Soft Water-fern |
| TRF | Cyathea australis | Rough Tree-fern |
| SC | Billardiera scandens | Common Apple-berry |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 59: Riparian Thicket  Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  40 % cover  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  T Salix cinerea Grey Sallow high high  T Pinus radiata Radiata Pine high high  MS Prunus cerasifera Cherry Plum high high  MS Cotoneaster pannosus Velvet Cotoneaster high high  MS Erica lusitanica Spanish Heath high high SS Rubus sp. aff. armeniacus Blackberry high high  LH Solanum nigrum sensu Willis (1972) Black Nightshade high low MH Lotus suaveolens Hairy Bird's-foot Trefoil high high  MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high low  SH Callitriche stagnalis Common Starwort high 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

Highlands Northern Fall 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 |
| Understroey 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 | 3 | 15% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 15 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 5% | MNG |
| Bryophytes/Lichens | na | 10% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 68: Creekline Grassy Woodland – Highlands Northern Fall bioregion | |
|  | LF Code Species typical of at least part of EVC range Common Name  T Acacia dealbata Silver Wattle  T Acacia melanoxylon Blackwood  MS Acacia pycnantha Golden Wattle  MS Melaleuca parvistaminea Rough-barked Haoney-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 Poa labillardierei Common Tussock-grass  LTG Carex appressa Tall Sedge  LNG Phragmites australis Common Reed  MTG Elymus scaber var. scaber Common Wheat-grass  MTG Juncus spp. Rush  MTG Cyperus spp. Flat-sedge  MNG Microlaena stipoides var. stipoides Weeping Grass  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 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**

Highlands – Northern Fall 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**  Eucalyptus spp. | **DBH(cm)**  60 cm | **#/ha**  15 / ha |

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | Eucalyptus nortonii  Eucalyptus macrorhyncha Eucalyptus goniocalyx s.l. | Silver Bundy  Red Stringybark Bundy |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 1 | 5% | T |
| Medium Shrub | 4 | 20% | MS |
| Small Shrub | 3 | 20% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Medium to Small Tufted Graminoid | 4 | 5% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 5% | MNG |
| Ground Fern | 1 | 1% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| **Total understorey projective foliage cover** |  | **70%** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  T |  | **Species typical of at least part of EVC range**  Allocasuarina verticillata | **Common Name**  Drooping Sheoak |
| MS |  | Calytrix tetragona | Common Fringe-myrtle |
| MS |  | Cassinia longifolia | Shiny Cassinia |
| MS | R r | Grevillea jephcottii | Green Grevillea |
| MS |  | Acacia verniciflua | Varnish Wattle |
| SS |  | Micromyrtus ciliata | Heath-myrtle |
| SS |  | Tetratheca ciliata | Pink-bells |
| SS |  | Dillwynia sericea s.l. | Showy Parrot-pea |
| LH |  | Stackhousia viminea | Slender Stackhousia |
| LH |  | Derwentia perfoliata | Digger's Speedwell |
| MH |  | Euchiton collinus s.s. | Creeping Cudweed |
| MH |  | Drosera peltata | Pale Sundew |
| MH |  | Daucus glochidiatus | Australian Carrot |
| MH |  | Gonocarpus elatus | Tall Raspwort |
| MTG |  | Dichelachne sieberiana | Rough Plume-grass |
| MTG | r | Poa sieberiana var. cyanophylla | Blue-leaf Tussock-grass |
| MTG |  | Juncus bufonius | Toad Rush |
| MTG |  | Dianella revoluta s.l. | Black-anther Flax-lily |
| MNG |  | Microlaena stipoides var. stipoides | Weeping Grass |
| GF |  | Cheilanthes sieberi ssp. sieberi | Narrow Rock-fern |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 72: Granitic Hills Woodland Highlands – Northern Fall 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 Centaurium erythraea Common Centaury high low  MNG Aira spp. Hair Grass high low  Und Vulpia spp. Fescue high low  Published by the Victorian Government Department of Sustainability and Environment September 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**

Highlands – Northern Fall 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**  Immature Canopy Shrub | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Medium Shrub | 8 | 30% | MS |
| Small Shrub | 1 | 1% | SS |
| Prostrate Shrub | 2 | 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**  MS | **Species typical of at least part of EVC range**  Coprosma quadrifida | **Common Name**  Prickly Currant-bush |
| MS | Lomatia myricoides | River Lomatia |
| MS | Leptospermum brevipes | Slender Tea-tree |
| MS | Kunzea ericoides | Burgan |
| SS | Leucopogon hookeri | Mountain Beard-heath |
| PS | 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 Highlands – Northern Fall 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 high  LNG Holcus lanatus Yorkshire Fog high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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

Highlands – Northern Fall bioregion

EVC 83: Swampy Riparian Woodland

###### Description:

Woodland to 15 m tall generally occupying low energy streams of the foothills and plains. The lower strata are variously locally dominated by a range of large and medium shrub species on the stream levees in combination with large tussock grasses and sedges in the ground layer.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 20% | Eucalyptus camphora ssp. humeana  Eucalyptus radiata s.l. | Mountain Swamp-gum  Narrow-leaf Peppermint |

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

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 83: Swampy Riparian Woodland Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia melanoxylon Blackwood  T Acacia dealbata Silver Wattle  MS Coprosma quadrifida Prickly Currant-bush  MS Leptospermum continentale Prickly Tea-tree  MS Epacris breviflora Drumstick Heath  SS Rubus parvifolius Small-leaf Bramble  LH Mentha laxiflora Forest Mint  LH Epilobium gunnianum Gunn's Willow-herb  LH Urtica incisa Scrub Nettle  LH Senecio minimus Shrubby Fireweed  MH Acaena novae-zelandiae Bidgee-widgee  MH Geranium potentilloides Cinquefoil Cranesbill  MH Asperula scoparia Prickly Woodruff  SH Hydrocotyle hirta Hairy Pennywort  SH Dichondra repens Kidney-weed  SH Hypericum japonicum Matted St John's Wort  SH Gonocarpus micranthus ssp. micranthus Creeping Raspwort  SH Hydrocotyle tripartita Slender Pennywort  LTG Cyperus lucidus Leafy Flat-sedge  LTG Carex appressa Tall Sedge  LTG Gahnia sieberiana Red-fruit Saw-sedge  LTG Poa labillardierei Common Tussock-grass  LNG Phragmites australis Common Reed  MTG Poa ensiformis Sword Tussock-grass  MNG Microlaena stipoides var. stipoides Weeping Grass  MNG Eleocharis gracilis Slender Spike-sedge  MNG Echinopogon ovatus Common Hedgehog-grass  GF Pteridium esculentum Austral Bracken  GF Blechnum nudum Fishbone Water-fern  GF Polystichum proliferum Mother Shield-fern  GF Blechnum minus Soft Water-fern  TRF Dicksonia antarctica Soft Tree-fern  **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  20 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Rubus fruticosus spp. agg. Blackberry high high LH Cirsium vulgare Spear Thistle high high MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high low  MH Mimulus moschatus Musk Monkey-flower high low  MH Lotus corniculatus Bird's-foot Trefoil high high SH Trifolium repens var. repens White Clover high low  LNG Holcus lanatus Yorkshire Fog high high MTG Anthoxanthum odoratum Sweet Vernal-grass high high  Published by the Victorian Government Department of Sustainability and Environment April 2004  © The State of Victoria Department of Sustainability and Environment 2004  This publication is copyright. Reproduction and the making available of this material for personal, in-house or non-commercial purposes is authorised, on condition that:   * the copyright owner is acknowledged; * no official connection is claimed; * the material is made available without charge or at cost; and * the material is not subject to inaccurate, misleading or derogatory treatment.   Requests for permission to reproduce or communicate this material in any way not permitted by this licence (or by the fair dealing provisions of the Copyright Act 1968) should be directed to the Nominated Officer, Copyright, 8 Nicholson Street, East Melbourne, Victoria, 3002.  For more information contact: Customer Service Centre, 136 186  This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication. |

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

Highlands – Northern Fall 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 Highlands - Northern Fall 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

Highlands – Northern Fall bioregion

EVC 169: Dry Valley Forest

Description:

Open eucalypt forest to 20 m tall occurring along minor gullies, ephemeral streams and river flats. The overstorey may contain a range of eucalypts typical of drier environments over an understorey of scattered shrubs and a notably mossy herb-rich groundcover.

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

Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| %cover | Character Species | Common Name |
| 30% | Eucalyptus macrorhyncha  Eucalyptus cypellocarpa | Red Stringybark  Mountain Grey-gum |

|  |  |  |  |
| --- | --- | --- | --- |
| Understorey: Life form | #Spp | %Cover | LF code |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 4 | 15% | T |
| Medium Shrub | 9 | 30% | MS |
| Small Shrub | 3 | 10% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 4 | 5% | LH |
| Medium Herb | 11 | 15% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 3 | 5% | LTG |
| Medium to Small Tufted Graminoid | 4 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 3 | 10% | GF |
| Tree Fern | 1 | 5% | TRF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 169: Dry Valley Forest Highlands – Northern Fall bioregion | |
|  | LF Code Species typical of at least part of EVC range Common Name  T Olearia argophylla Musk Daisy-bush  T Acacia dealbata Silver Wattle  MS Pimelea axiflora Bootlace Bush  MS Olearia phlogopappa Dusty Daisy-bush  MS Coprosma quadrifida Prickly Currant-bush  MS Goodia lotifolia Golden Tip  SS Tetratheca pilosa Hairy Pink-bells  SS Hibbertia obtusifolia Grey Guinea-flower  SS Olearia megalophylla Large-leaf Daisy-bush  LH Stypandra glauca Nodding Blue-lily  LH Chrysocephalum semipapposum Clustered Everlasting  MH Stellaria pungens Prickly Starwort  MH Hydrocotyle hirta Hairy Pennywort  MH Gonocarpus tetragynus Common Raspwort  SH Leptinella filicula Mountain Cotula  SH Chiloglottis gunnii s.l. Common Bird-orchid  LTG Lomandra longifolia Spiny-headed Mat-rush  LTG Gahnia sieberiana Red-fruit Saw-sedge  LTG Deyeuxia frigida Forest Bent-grass  MTG Poa australis spp. agg. Tussock Grass  MTG Libertia pulchella Pretty Grass-flag  MTG Dianella revoluta s.l. Black-anther Flax-lily  MNG Microlaena stipoides var. stipoides Weeping Grass  GF Blechnum wattsii Hard Water-fern  GF Polystichum proliferum Mother Shield-fern  SC Hardenbergia violacea Purple Coral-pea  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 Cerastium glomeratum s.l. Common Mouse-ear Chickweed 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**

Highlands – Northern Fall bioregion

EVC 175: Grassy Woodland

###### Description:

A variable open eucalypt woodland to 15 m tall over 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** | **Character Species** | **Common Name** |
| 20% | Eucalyptus dives  Eucalyptus rubida  Eucalyptus mannifera ssp. mannifera Allocasuarina verticillata | Broad-leaved Peppermint  Candlebark Brittle Gum 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 | 20% | MS |
| Small Shrub | 1 | 1% | SS |
| Large Herb | 5 | 10% | LH |
| Medium Herb | 4 | 10% | MH |
| Large Tufted Graminoid | 2 | 1% | LTG |
| Medium to Small Tufted Graminoid | 8 | 30% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 2 | 1% | GF |
| Scrambler or Climber | 1 | 5% | SC |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS | Pultenaea juniperina s.l. | Prickly Bush-pea |
| MS | Pomaderris velutina | Velvet Pomaderris |
| MS | Brachyloma daphnoides | Daphne Heath |
| SS | Platylobium formosum | Handsome Flat-pea |
| LH | Derwentia perfoliata | Digger's Speedwell |
| LH | Senecio quadridentatus | Cotton Fireweed |
| LH | Wahlenbergia gracilis s.l. | Sprawling Bluebell |
| LH | Chrysocephalum semipapposum | Clustered Everlasting |
| MH | Geranium solanderi s.l. | Austral Cranesbill |
| MH | Crassula sieberiana ssp. sieberiana | Sieber Crassula |
| MH | Stellaria pungens | Prickly Starwort |
| MH | Daucus glochidiatus | Australian Carrot |
| SH | Crassula sieberiana | Sieber Crassula |
| LTG | Lomandra longifolia | Spiny-headed Mat-rush |
| MTG | Dianella revoluta s.l. | Black-anther Flax-lily |
| MTG | Luzula meridionalis var. flaccida | Common Woodrush |
| MTG | Lepidosperma laterale var. laterale | Variable Sword-sedge |
| MTG | Poa sieberiana var. sieberiana | Grey Tussock-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Cheilanthes sieberi ssp. sieberi | Narrow Rock-fern |
| GF | Asplenium flabellifolium | Necklace Fern |
| SC | Hardenbergia violacea | Purple Coral-pea |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 175: Grassy Woodland Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Verbascum virgatum Twiggy Mullein high high  MH Hypochoeris radicata Cat's Ear high low  MH Acetosella vulgaris Sheep Sorrel high high MH Centaurium erythraea Common Centaury 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**

Highlands – Northern Fall bioregion

EVC 185: Perched Boggy Shrubland

###### Description:

Dense shrubland to 3 m tall over a ground layer of herbs, sedges and often abundant Sphagnum moss occupying valleys on granitic massif plateaus at 400-600 m asl in areas with more than 900 mm annual rainfall. It occurs on all aspects of very gentle slopes above drainage lines or across hillsides between drainage lines. Soils are extremely saturated sandy clay, which may be associated with an impermeable clay layer or an hydrological phenomenon creating a soak or spring effect.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 6 | 50% | MS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 6 | 10% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 4 | 10% | LTG |
| Large Non-tufted Graminoid | 1 | 5% | LNG |
| Medium to Small Tufted Graminoid | 3 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 2 | 10% | GF |
| Bryophytes/Lichens | na | 30% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Leptospermum continentale | **Common Name**  Prickly Tea-tree |
| MS | Acacia pravissima | Ovens Wattle |
| MS | Baeckea utilis s.s. | Mountain Baeckea |
| MS | Goodenia ovata | Hop Goodenia |
| PS | Acrotriche prostrata | Trailing Ground-berry |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Lobelia anceps | Angled Lobelia |
| MH | Centella cordifolia | Centella |
| MH | Hydrocotyle hirta | Hairy Pennywort |
| SH | Gonocarpus micranthus ssp. micranthus | Creeping Raspwort |
| LTG | Gahnia sieberiana | Red-fruit Saw-sedge |
| LTG | Lomandra longifolia | Spiny-headed Mat-rush |
| LTG | Juncus procerus | Tall Rush |
| LNG | Tetrarrhena juncea | Forest Wire-grass |
| MTG | Juncus pauciflorus | Loose-flower Rush |
| MTG | Luzula meridionalis | Common Woodrush |
| MTG | Poa australis spp. agg. | Tussock Grass |
| MTG | Lepidosperma laterale | Variable Sword-sedge |
| MNG | Poa tenera | Slender Tussock-grass |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Calochlaena dubia | Common Ground-fern |

###### Recruitment:

Continuous

###### Organic Litter:

20 % cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| SS LH | Rubus ulmifolius Sonchus oleraceus | Blackberry  Common Sow-thistle | high high | high low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 185: Perched Boggy Shrubland Highlands – Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands – Northern Fall bioregion

EVC 191: Riparian Scrub

###### Description:

A dense shrubland to 6 m tall growing on waterlogged substrates often with a peaty surface horizon. Emergent eucalypts may be occasionally present. The understorey typically consists of sedges tolerant of seasonal waterlogging. Occurs along creeks and minor stream tributaries.

###### Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 60% | Leptospermum lanigerum | Woolly Tea-tree |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** Medium Shrub | **#Spp**  3 | **%Cover**  10% | **LF code**  MS |
| Large Herb | 4 | 10% | LH |
| Medium Herb | 8 | 10% | MH |
| Small or Prostrate Herb | 4 | 5% | SH |
| Large Tufted Graminoid | 3 | 20% | LTG |
| Large Non-tufted Graminoid | 2 | 5% | LNG |
| Medium to Small Tufted Graminoid | 5 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 3 | 10% | MNG |
| Bryophytes/Lichens | na | 20% | BL |
| Scrambler/Climber | 1 | 5% | SC |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Coprosma quadrifida | **Common Name**  Prickly Currant-bush |
| MS | Acacia verticillata | Prickly Moses |
| MH | Oxalis perennans | Grassland Wood-sorrel |
| SH | Oxalis exilis | Shady Wood-sorrel |
| SH | Crassula helmsii | Swamp Crassula |
| LTG | Poa labillardierei | Common Tussock-grass |
| LTG | Carex tereticaulis | Hollow Sedge |
| LTG | Carex appressa | Tall Sedge |
| LNG | Phragmites australis | Common Reed |
| LNG | Lepidosperma longitudinale | Pithy Sword-sedge |
| MTG | Triglochin procerum s.l. | Water Ribbons |
| MNG | Empodisma minus | Spreading Rope-rush |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| SC | Gleichenia microphylla | Scrambling Coral-fern |

**Recruitment:**

Continuous

###### Organic Litter:

40 % cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 191: Riparian Scrub  Highlands - Northern Fall bioregion | |
|  | **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH Rumex conglomeratus Clustered Dock high low  LH Sonchus oleraceus Common Sow-thistle high low  LH Cirsium vulgare Spear Thistle high high  MH Trifolium dubium Suckling Clover high low  MH Trifolium subterraneum Subterranean Clover high low  MH Hypochoeris radicata Cat's Ear high low MH Leontodon taraxacoides ssp. taraxacoides Hairy Hawkbit high low  LNG Holcus lanatus Yorkshire Fog high high  MTG Bromus hordeaceus ssp. hordeaceus Soft Brome high low MTG Briza maxima Large Quaking-grass high low  MTG Vulpia bromoides Squirrel-tail Fescue high low  MTG Romulea rosea Onion Grass high low  MTG Bromus diandrus Great Brome high low MTG Anthoxanthum odoratum Sweet Vernal-grass high high MNG Cynosurus echinatus Rough Dog's-tail 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**

Highlands – Northern Fall bioregion

EVC 201: Shrubby Wet Forest

###### Description:

Tall eucalypt forest to 30 m tall with scattered understorey trees over a tall broad-leaved shrubby understorey and a moist, shaded, fern-rich ground layer that is usually dominated by tree-ferns. Herbs may also be abundant where light penetrates the ground layer.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus delegatensis ssp. delegatensis  Eucalyptus obliqua | Alpine Ash  Messmate Stringybark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form**  Immature Canopy Tree | **#Spp** | **%Cover**  5% | **LF code**  IT |
| Understorey Tree or Large Shrub | 2 | 20% | T |
| Medium Shrub | 7 | 25% | MS |
| Small Shrub | 3 | 10% | SS |
| Large Herb | 2 | 1% | LH |
| Medium Herb | 8 | 15% | MH |
| Small or Prostrate Herb | 2 | 1% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 6 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 2 | 5% | GF |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  T | **Species typical of at least part of EVC range**  Acacia dealbata | **Common Name**  Silver Wattle |
| MS | Polyscias sambucifolia | Elderberry Panax |
| MS | Coprosma hirtella | Rough Coprosma |
| MS | Daviesia ulicifolia | Gorse Bitter-pea |
| MS | Olearia phlogopappa | Dusty Daisy-bush |
| SS | Leucopogon hookeri | Mountain Beard-heath |
| SS | Ozothamnus thyrsoideus | Sticky Everlasting |
| SS | Olearia megalophylla | Large-leaf Daisy-bush |
| SS | Olearia erubescens | Moth Daisy-bush |
| LH | Senecio linearifolius | Fireweed Groundsel |
| LH | Derwentia derwentiana | Derwent Speedwell |
| LH | Arthropodium milleflorum s.l. | Pale Vanilla-lily |
| MH | Lagenophora stipitata | Common Bottle-daisy |
| MH | Poranthera microphylla | Small Poranthera |
| MH | Stellaria pungens | Prickly Starwort |
| MH | Gonocarpus tetragynus | Common Raspwort |
| SH | Leptinella filicula | Mountain Cotula |
| SH | Oxalis exilis | Shady Wood-sorrel |
| LTG | Lomandra longifolia ssp. exilis | Cluster-headed Mat-rush |
| LTG | Deyeuxia quadriseta | Reed Bent-grass |
| MTG | Stylidium graminifolium s.l. | Grass Trigger-plant |
| MTG | Dianella tasmanica | Tasman Flax-lily |
| MTG | Luzula meridionalis var. flaccida | Common Woodrush |
| MTG | Deyeuxia monticola var. monticola | Mountain Bent-grass |
| MNG | Poa tenera | Slender Tussock-grass |
| GF | Pteridium esculentum | Austral Bracken |
| GF | Polystichum proliferum | Mother Shield-fern |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 201: Shrubby Wet Forest Highlands – Northern Fall bioregion | |
|  | **Recruitment:**  Continuous  **Organic Litter:**  50 % cover  **Logs:**  30 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MH Hypochoeris radicata Cat's Ear high low  MH Prunella vulgaris Self-heal high low  Published by the Victorian Government Department of Sustainability and Environment September 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**

Highlands – Northern Fall bioregion

EVC 206: Sub-alpine Grassland

###### Description:

Occurs primarily in areas at altitudes of around 1200 m above sea level. Structurally and floristically this EVC is dominated by grasses. Any shrubs present tend to be small and cryptic. The fertile and highly organic soils which are generally derived from granodiorite provide a suitable substrate for a lush cover of grasses and herbs, many specific to montane/sub-alpine environments. Snow persists for several months over winter. Species richness is low, indicative of the harsh environment.

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

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Baeckea gunniana | **Common Name**  Alpine Baeckea |
| SS | Grevillea australis | Alpine Grevillea |
| SS | Leucopogon hookeri | Mountain Beard-heath |
| SS | Hovea montana | Alpine Rusty-pods |
| PS | Pimelea alpina | Alpine Rice-flower |
| MH | Asperula gunnii | Mountain Woodruff |
| MH | Celmisia asteliifolia spp. agg. | Silver Daisy |
| MH | Leptorhynchos squamatus | Scaly Buttons |
| MH | Craspedia glauca spp. agg. | Common Billy-buttons |
| SH | Scleranthus biflorus s.l. | Twin-flower Knawel |
| SH | Gonocarpus micranthus ssp. micranthus | Creeping Raspwort |
| SH | Cotula alpina | Alpine Cotula |
| MTG | Carex breviculmis | Common Grass-sedge |
| MTG | Poa fawcettiae | Horny Snow-grass |
| MTG | Stylidium graminifolium s.l. | Grass Trigger-plant |
| MTG | Poa costiniana | Bog Snow-grass |
| MNG | Empodisma minus | Spreading Rope-rush |

###### Recruitment:

Continuous

###### Organic Litter:

10% Cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| MH  MH SH | Acetosella vulgaris  Hypochoeris radicata Trifolium repens var. repens | Sheep Sorrel  Cat's Ear White Clover | high  high high | high  low high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 206: Sub-alpine Grassland Highlands – Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands – Northern Fall bioregion

EVC 207: Montane Grassy Shrubland

###### Description:

A shrubland, sometimes with emergent eucalypts to 15 m tall over a ground layer dominated by grasses and forbs. It occurs on dry and exposed steep, rocky mid to upper slopes at montane elevations. Soils are shallow, dark brown stony loams to clay loams.

+ eucalypt woodland only components (ignore when assessing shrublands and standardise site condition score as required)

###### Large trees+:

|  |  |  |
| --- | --- | --- |
| **Species** | **DBH(cm)** | **#/ha** |
| Eucalyptus spp. | 50 cm | 15 / ha |

**Tree Canopy Cover:**

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 10% | Eucalyptus pauciflora  Eucalyptus rubida | Snow Gum  Candlebark |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree+ |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 20% | T |
| Mallee Tree | 1 | 1% | MT |
| Medium Shrub | 6 | 20% | MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 2 | 5% | LH |
| Medium Herb | 9 | 20% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 2 | 5% | LTG |
| Medium to Small Tufted Graminoid | 6 | 15% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 5% | MNG |
| Ground Fern | 1 | 5% | GF |
| Bryophytes/Lichens | na | 10% | BL |
| Soil Crust | na | 10% | S/C |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 207: Montane Grassy Shrubland Highlands - Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  MS Brachyloma daphnoides Daphne Heath  MS Hymenanthera dentata Tree Violet  MS Grevillea lanigera Woolly Grevillea  MS Daviesia mimosoides ssp. mimosoides Blunt-leaf Bitter-pea  LH Chrysocephalum semipapposum Clustered Everlasting  LH Senecio linearifolius Fireweed Groundsel  LH Wahlenbergia luteola Bronze Bluebell  MH Galium gaudichaudii Rough Bedstraw  MH Geranium solanderi s.l. Austral Cranesbill  MH Stellaria pungens Prickly Starwort  SH Crassula sieberiana Australian Stonecrop  MTG Themeda triandra Kangaroo Grass  MTG Poa phillipsiana Blue Snow-grass  MTG Poa costiniana Bog Snow-grass  MTG Poa sieberiana Grey Tussock-grass  GF Adiantum aethiopicum Common Maidenhair  GF Asplenium flabellifolium Necklace Fern  **Recruitment:**  Continuous  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1 ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  MS Rosa rubiginosa Sweet Briar high high  SS Rubus laciniatus Cut-leaf Bramble high high MH Hypochoeris radicata Cat's Ear high low MH Trifolium arvense var. arvense Hare’s-foot Clover 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**

Highlands – Northern Fall bioregion

EVC 210: Sub-alpine Wet Heathland

###### Description:

Virtually treeless and characterised by a dense layer of low heathy shrubs to 2 m tall, with a number of sedges and rushes in the understorey. Occurs at elevations above 1000 m, in soaks or along small streams. Rainfall is generally greater than 1000 mm per annum, and during winter, this EVC can tolerate long periods of snow cover and low temperature. Deep, peaty, sodden soils are usually covered by a layer of sphagnum moss.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life forms: Life form** Medium Shrub | **#Spp**  6 | **%Cover**  30% | **LF code**  MS |
| Small Shrub | 2 | 10% | SS |
| Large Herb | 5 | 5% | LH |
| Medium Herb | 10 | 15% | MH |
| Small or Prostrate Herb | 4 | 10% | SH |
| Large Tufted Graminoid | 1 | 1% | LTG |
| Medium to Small Tufted Graminoid | 10 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 4 | 15% | MNG |
| Bryophytes/Lichens | na | 20% | BL |

|  |  |  |  |
| --- | --- | --- | --- |
| **LF Code**  MS |  | **Species typical of at least part of EVC range**  Hakea microcarpa | **Common Name**  Small-fruit Hakea |
| MS |  | Comesperma retusum | Mountain Milkwort |
| MS |  | Olearia glandulosa | Swamp Daisy-bush |
| MS |  | Leptospermum myrtifolium | Myrtle Tea-tree |
| SS | r | Pultenaea fasciculata | Alpine Bush-pea |
| SS |  | Epacris microphylla s.l. | Coral Heath |
| LH |  | Senecio hispidulus | Rough Fireweed |
| LH |  | Senecio tenuiflorus | Slender Fireweed |
| LH |  | Veronica gracilis | Slender Speedwell |
| LH |  | Epilobium billardierianum | Variable Willow-herb |
| MH |  | Gratiola peruviana | Austral Brooklime |
| MH |  | Brachyscome scapigera | Tufted Daisy |
| MH |  | Lagenophora gracilis | Slender Bottle-daisy |
| MH |  | Craspedia glauca spp. agg. | Common Billy-buttons |
| SH |  | Hypericum japonicum | Matted St John's Wort |
| SH |  | Hydrocotyle tripartita | Slender Pennywort |
| SH |  | Isotoma fluviatilis ssp. australis | Swamp Isotome |
| SH |  | Gonocarpus micranthus ssp. micranthus | Creeping Raspwort |
| LTG |  | Juncus sarophorus | Broom Rush |
| LTG |  | Deyeuxia quadriseta | Reed Bent-grass |
| MTG |  | Austrodanthonia laevis | Smooth Wallaby-grass |
| MTG |  | Poa sieberiana | Grey Tussock-grass |
| MTG |  | Luzula meridionalis | Common Woodrush |
| MTG |  | Poa sieberiana var. sieberiana | Grey Tussock-grass |
| MNG |  | Empodisma minus | Spreading Rope-rush |
| MNG |  | Baloskion australe | Mountain Cord-rush |
| MNG | r | Juncus falcatus | Sickle-leaf Rush |
| MNG |  | Eleocharis gracilis | Slender Spike-sedge |

###### Recruitment:

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

###### Organic Litter:

10% cover

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 210: Sub-alpine Wet Heathland Highlands – Northern Fall bioregion | |
|  | **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 Prunella vulgaris Self-heal high high MH Cerastium glomeratum s.l. Common Mouse-ear Chickweed high low  SH Trifolium repens var. repens White Clover high high  LNG Holcus lanatus Yorkshire Fog high high  MTG Festuca rubra Red Fescue 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**

Highlands – Northern Fall bioregion

EVC 318: Montane Swamp

###### Description:

Forms in drainage-lines on wet alluviums at montane and sub-montane elevations where annual rainfall is in the order of 650- 750 mm. The vegetation is virtually treeless but occasional eucalypt emergents may be present. Characterised by an open shrub layer and a ground layer with a diversity of sedges, grasses, herbs and ferns.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 5 | 20% | MS |
| Small Shrub | 2 | 5% | SS |
| Large Herb | 1 | 1% | LH |
| Medium Herb | 3 | 10% | MH |
| Small or Prostrate Herb | 2 | 5% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 4 | 10% | MTG |
| Medium to Tiny Non-tufted Graminoid | 4 | 15% | MNG |
| Ground Fern | 1 | 1% | GF |
| Bryophytes/Lichens | na | 40% | BL |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Baeckea utilis s.l. | **Common Name**  Mountain Baeckea |
| MS | Leptospermum myrtifolium | Myrtle Tea-tree |
| MS | Epacris breviflora | Drumstick Heath |
| MS | Hakea microcarpa | Small-fruit Hakea |
| SS | Epacris microphylla s.l. | Coral Heath |
| MH | Asperula conferta | Common Woodruff |
| SH | Leptinella filicula | Mountain Cotula |
| LTG | Carex appressa | Tall Sedge |
| MTG | Schoenus apogon | Common Bog-sedge |
| MTG | Isolepis subtilissima | Club-sedge |
| MTG | Festuca asperula | Graceful Fescue |
| MTG | Poa costiniana | Prickly Snow-grass |
| MNG | Baloskion australe | Mountain Cord-rush |
| MNG | Baumea gunnii | Slender Twig-sedge |
| MNG | Empodisma minus | Spreading Rope-rush |
| GF | Blechnum penna-marina ssp. alpina | Alpine Water-fern |

###### Recruitment:

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

###### Organic Litter:

10% cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code**  MH | **Typical Weed Species**  Hypochoeris radicata | **Common Name**  Cat's Ear | **Invasive**  high | **Impact**  low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 318: Montane Swamp Highlands – Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands – Northern Fall bioregion

EVC 319: Montane Herb-rich Woodland

###### Description:

Occurs on southern and eastern-facing slopes or in protected gullies at elevations of around 1000 m above sea level, and receives a high rainfall of almost 1110 mm per annum. It is subject to cold air drainage, which influences the species mix. A mixture of eucalypts to 25 m tall forms the overstorey, with Silver Wattle abundant below. The shrub layer is neither diverse nor dense. The ground layer carries a diversity of herbs, graminoids and grasses. Climbers are commonly present.

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

###### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 40% | Eucalyptus radiata s.l.  Eucalyptus delegatensis ssp. delegatensis | Narrow-leaf Peppermint  Alpine Ash |

|  |  |  |  |
| --- | --- | --- | --- |
| **Understorey: Life form** | **#Spp** | **%Cover** | **LF code** |
| Immature Canopy Tree |  | 5% | IT |
| Understorey Tree or Large Shrub | 2 | 10% | T |
| Medium Shrub | 6 | 15% | MS |
| Small Shrub | 2 | 5% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 5 | 10% | LH |
| Medium Herb | 12 | 20% | MH |
| Small or Prostrate Herb | 3 | 5% | SH |
| Large Tufted Graminoid | 1 | 5% | LTG |
| Medium to Small Tufted Graminoid | 8 | 25% | MTG |
| Medium to Tiny Non-tufted Graminoid | 1 | 1% | MNG |
| Ground Fern | 3 | 10% | GF |
| Scrambler or Climber | 2 | 5% | SC |
| Bryophytes/Lichens | na | 20% | BL |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 319: Montane Herb-rich Woodland Highlands – Northern Fall bioregion | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T Acacia dealbata Silver Wattle  T Notelaea ligustrina Privet Mock-olive  MS Coprosma hirtella Rough Coprosma  MS Pultenaea juniperina s.l. Prickly Bush-pea  MS Coprosma quadrifida Prickly Currant-bush  MS Exocarpos strictus Pale-fruit Ballart  SS Olearia erubescens Moth Daisy-bush  SS Leucopogon hookeri Mountain Beard-heath  SS Tetratheca ciliata Pink-bells  PS Platylobium formosum Handsome Flat-pea  LH Wahlenbergia stricta Tall Bluebell  LH Epilobium billardierianum Variable Willow-herb  LH Picris angustifolia Native Picris  LH Derwentia derwentiana Derwent Speedwell  MH Ranunculus plebeius s.l. Forest/Hairy Buttercup  MH Stellaria pungens Prickly Starwort  MH Asperula scoparia Prickly Woodruff  MH Acaena novae-zelandiae Bidgee-widgee  SH Hydrocotyle laxiflora Stinking Pennywort  SH Lobelia pedunculata s.l. Matted Pratia  SH Leptinella filicula Mountain Cotula  SH Oxalis exilis Shady Wood-sorrel  LTG Poa helmsii Tall Mountain Tussock-grass  LTG Lomandra longifolia Spiny-headed Mat-rush  MTG Poa sieberiana Grey Tussock-grass  MTG Carex breviculmis Common Grass-sedge  MTG Poa ensiformis Sword Tussock-grass  MTG Dianella tasmanica Tasman Flax-lily  MNG Echinopogon ovatus Common Hedgehog-grass  GF Pteridium esculentum Austral Bracken  GF Polystichum proliferum Mother Shield-fern  GF Asplenium flabellifolium Necklace Fern  SC Glycine clandestina Twining Glycine  SC Clematis aristata Mountain Clematis  **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 SH Trifolium repens var. repens White 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**

Highlands – Northern Fall bioregion

EVC 702.61: Limestone Montane Grassland

###### Description:

Occurs on Silurian limestone at montane elevations around 1000 m above sea level. Structurally and floristically an open grassland with scattered, isolated patches of shrubs over a ground layer dominated by herbs and grasses.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Medium Shrub | 2 | 5% | MS |
| Small Shrub | 1 | 1% | SS |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb | 3 | 10% | SH |
| Medium to Small Tufted Graminoid | 6 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Ground Fern | 2 | 5% | GF |
| Bryophytes/Lichens | na | 20% | BL |
| Soil Crust | na | 10% | S/C |

|  |  |  |
| --- | --- | --- |
| **LF Code**  MS | **Species typical of at least part of EVC range**  Olearia alpicola | **Common Name**  Alpine Daisy-bush |
| MS | Rr Discaria pubescens | Hairy Anchor Plant |
| MS | Exocarpos strictus | Pale-fruit Ballart |
| PS | Muehlenbeckia axillaris | Matted Lignum |
| LH | Senecio quadridentatus | Cotton Fireweed |
| MH | Geranium solanderi s.l. | Austral Cranesbill |
| MH | Asperula conferta | Common Woodruff |
| MH | Daucus glochidiatus | Australian Carrot |
| MH | Vv Thesium australe | Austral Toad-flax |
| SH | Scleranthus diander | Tufted Knawel |
| SH | k Desmodium varians | Slender Tick-trefoil |
| MTG | Themeda triandra | Kangaroo Grass |
| MTG | v Poa hookeri | Hooker’s Tussock-grass |
| MTG | Poa sieberiana var. hirtella | Grey Tussock-grass |
| MTG | Carex breviculmis | Common Grass-sedge |
| MNG | Microlaena stipoides var. stipoides | Weeping Grass |
| GF | Asplenium flabellifolium | Necklace Fern |
| GF | r Asplenium trichomanes ssp. quadrivalens | Common Spleenwort |

###### Recruitment:

Continuous

###### Organic Litter:

10% Cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness: LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| MNG  LH LH MH MH | Aira caryophyllea  Verbascum virgatum Cirsium vulgare Hypochoeris radicata Centaurium erythraea | Silvery Hair-grass  Twiggy Mullein Spear Thistle Cat's Ear  Common Centaury | high  high high high high | high  high high low low |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 702.61: Limestone Montane Grassland Highlands - Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands – Northern Fall bioregion

EVC 702.62: Montane Grassland

###### Description:

Occurs primarily in areas at altitudes of around 700 to 1000 m above sea level. Structurally and floristically this EVC is dominated by grasses. The fertile and highly organic soils which are generally derived from Quaternary alluvial flats provide a suitable substrate for a lush cover of grasses and herbs.

|  |  |  |  |
| --- | --- | --- | --- |
| **Life Forms: Life form** | **#Spp** | **%Cover** | **LF code** |
| Prostrate Shrub | 1 | 1% | PS |
| Large Herb | 3 | 5% | LH |
| Medium Herb | 11 | 20% | MH |
| Small or Prostrate Herb | 3 | 10% | SH |
| Medium to Small Tufted Graminoid | 6 | 20% | MTG |
| Medium to Tiny Non-tufted Graminoid | 2 | 5% | MNG |
| Bryophytes/Lichens | na | 20% | BL |
| Soil Crust | na | 10% | S/C |
| **Total understorey projective foliage cover** |  | **90%** |  |

|  |  |  |
| --- | --- | --- |
| **LF Code** | **Species typical of at least part of EVC range** | **Common Name** |
| PS | Wilsonia rotundifolia | Round-leaf Wilsonia |
| LH | Chrysocephalum apiculatum s.l. | Common Everlasting |
| LH | Wahlenbergia luteola | Bronze Bluebell |
| MH | Acaena agnipila | Hairy Sheep’s Burr |
| MH | Goodenia pinnatifida | Cut-leaf Goodenia |
| MH | Leptorhynchos squamatus | Scaly Buttons |
| MH | Cynoglossum suaveolens | Sweet Hound’s-tongue |
| SH | Desmodium gunnii | Southern Tick-trefoil |
| MTG | Austrodanthonia penicillata | Slender Wallaby-grass |
| MTG | Austrostipa scabra ssp. scabra | Rough Spear-grass |
| MTG | Elymus scaber var. scaber | Common Wheat-grass |
| MTG | Carex inversa | Knob Sedge |

###### Recruitment:

Continuous

###### Organic Litter:

10% Cover

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Weediness:** |  | | | |
| **LF Code** | **Typical Weed Species** | **Common Name** | **Invasive** | **Impact** |
| MH  MH SH | Acetosella vulgaris  Hypochoeris radicata Trifolium repens var. repens | Sheep Sorrel  Cat's Ear White Clover | high  high high | high  low high |

Ecological Vegetation Class bioregion benchmark

|  |  |
| --- | --- |
| EVC 702.62: Montane Grassland Highlands - Northern Fall bioregion | |
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**EVC/Bioregion Benchmark for Vegetation Quality Assessment**

Highlands Northern Fall Bioregion

## EVC 937: Swampy Woodland

##### Description:

Open eucalypt woodland to 15 m tall with ground-layer dominated by tussock grasses and/or sedges and often rich in herbs. Occurs on poorly drained, seasonally waterlogged heavy soils, primarily on swamp deposits but extending to suitable substrates within some landscapes of sedimentary origin.

##### Large Trees:

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

*Eucalyptus spp.*

60 cm

15 / ha

##### Tree Canopy Cover:

|  |  |  |
| --- | --- | --- |
| **%cover** | **Character Species** | **Common Name** |
| 15% | *Eucalyptus radiata s.l.*  *Eucalyptus camphora subsp. humeana Eucalyptus ovata* | Narrow-leaf Peppermint Mountain Swamp-gum Swamp Gum |

**Understorey: Lifeform**

**#Spp %Cover LF Code**

Immature Canopy Tree 5% IT

Understorey Tree or Large Shrub Medium Shrub

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 Ground Fern

1 5% T

4 20% MS

2 5% SS

2 10% LH

5 10% MH

2 5% SH

2 10% LTG

1 10% LNG

3 10% MTG

2 5% MNG

2 10% GF

Bryophytes/Lichens 20% BL



Ecological Vegetation Class Bioregion Benchmark

|  |  |
| --- | --- |
| EVC 937: Swampy Woodland | |
|  | **LF Code Species typical of at least part of EVC range Common Name**  T *Acacia melanoxylon* Blackwood  T *Melaleuca ericifolia* Swamp Paperbark  MS *Coprosma quadrifida* Prickly Currant-bush  MS *Epacris impressa* Common Heath  MS *Leptospermum continentale* Prickly Tea-tree  MS *Ozothamnus ferrugineus* Tree Everlasting  SS *Hibbertia riparia* Erect Guinea-flower  LH *Pterostylis longifolia s.l.* Tall Greenhood  LH *Senecio minimus* Shrubby Fireweed  MH *Centella cordifolia* Centella  MH *Gonocarpus tetragynus* Common Raspwort  MH *Gratiola peruviana* Austral Brooklime  MH *Mazus pumilio* Swamp Mazus  SH *Dichondra repens* Kidney-weed  SH *Opercularia varia* Variable Stinkweed  LTG *Carex appressa* Tall Sedge  LTG *Gahnia sieberiana* Red-fruit Saw-sedge  LNG *Gahnia radula* Thatch Saw-sedge  LNG *Lepidosperma longitudinale* Pithy Sword-sedge  MTG *Lepidosperma laterale* Variable Sword-sedge  MTG *Lomandra filiformis* Wattle Mat-rush  MTG *Schoenus apogon* Common Bog-sedge  MNG *Microlaena stipoides var. stipoides* Weeping Grass  MNG *Poa tenera* Slender Tussock-grass  GF *Lindsaea linearis* Screw Fern  **Recruitment:**  Continuous.  **Organic Litter:**  20 % cover  **Logs:**  15 m/0.1ha.  **Weediness:**  **LF Code Typical Weed Species Common Name Invasive Impact**  LH *Cirsium vulgare* Spear Thistle high high SC *Rubus fruticosus spp. agg.* Blackberry high high LNG *Holcus lanatus* Yorkshire Fog high high  MH *Hypochoeris radicata* Cat's Ear high low  MH *Allium triquetrum* Three-corner Garlic high high MTG *Anthoxanthum odoratum* Sweet Vernal-grass high high  Published by the Victorian Government Department of Sustainability and Environment November 2009  © 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/) |