

Benchmarks for wetland Ecological Vegetation Classes in Victoria

September 2024 update



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ISBN 978-1-74326-659-5 (pdf)

Citation: DEECA (2024) Benchmarks for wetland Ecological Vegetation Classes in Victoria – September 2024 update. Department of Energy, Environment and Climate Action, East Melbourne, Victoria.

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Acknowledgments

Doug Frood (Pathways Bushland and Environment) developed the wetland Ecological Vegetation Class (EVC) typology and benchmarks, and provided updates to the EVC benchmarks, including adding new provisional EVCs. Damien Cook (Rakali Ecological Consulting) provided information that supported the development of some of the new provisional EVC descriptions and benchmarks.

Phil Papas and Tamara van Polanen Petel (DELWP) formatted and edited preceding editions of the benchmarks.

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Introduction

This document is a compilation of 159 wetland Ecological Vegetation Class (EVC) benchmarks. These are required to assess the condition of wetland vegetation in Victoria using the method described in DELWP (2020a,b). This method forms part of the Index of Wetland Condition (IWC) (DSE 2005, DELWP 2020b).

These benchmarks are not used in implementing Victoria's native vegetation quality assessment for permitted clearing regulations, where site condition assessment is undertaken using the Habitat Hectares condition assessment method (DEPI 2013).

Updates to the benchmarks which have occurred since 2009 have included addition of 31 provisional wetland EVCs that cover near-coastal environments and additional more recently recognised vegetation communities in other areas. Many of the wetland EVCs which were not recognised during the broad-scale EVC mapping projects as well as the provisional wetland EVCs have not been formally adopted within DEECA's native vegetation quality assessment framework. The provisional wetland EVCs have EVC numbers preceded with an 'A'.

DEECA is presently reviewing EVCs. The wetland EVCs in this document may be at a finer scale than those adopted by DEECA after the review is complete.

Photographs of many of the wetland EVCs are contained in the field guide to Victorian Wetland Ecological Vegetation Classes second edition (DSE 2012).

Note that there is no benchmark for EVC 999 Unknown/Unclassified.

EVC 1111: Alkaline Basaltic Wetland Aggregate

Description:

Structurally and floristically diverse wetlands, with the following main component elements: Aquatic Herbland (EVC 653), Wet Verge Sedgeland (EVC 932), Plains Grassy Wetland/Aquatic Herbland Complex (EVC 755), Tall Marsh (EVC 821) and Sedge Wetland/Calcareous Wet Herbland Complex (EVC 883). Highly localised, on heavy alkaline soils of relatively recent basalt flows in the vicinity of Portland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Scientific name	Common name
<i>Amphibromus neesii</i>	Southern Swamp Wallaby-grass	<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis
<i>Amphibromus sinuatus</i>	Wavy Swamp Wallaby-grass	<i>Lobelia beaugleholei</i>	Showy Lobelia
<i>Asperula subsimplex</i>	Water Woodruff	<i>Montia australasica</i>	White Purslane
<i>Carex appressa</i>	Tall Sedge	<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
<i>Carex gaudichaudiana</i>	Fen Sedge	<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Crassula helmsii</i>	Swamp Crassula	<i>Persicaria decipiens</i>	Slender Knotweed
		<i>Phragmites australis</i>	Common Reed
<i>Cycnogeton alcockiae</i>	Southern Water-ribbons		
<i>Eleocharis acuta</i>	Common Spike-sedge	<i>Potamogeton cheesemanii</i>	Red Pondweed
<i>Glyceria australis</i>	Australian Sweet-grass	<i>Ranunculus amphitrichus</i>	Small River Buttercup
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort	<i>Rumex bidens</i>	Mud Dock
<i>Hydrocotyle tripartita</i>	Slender Pennywort	<i>Senecio pinnatifolius</i>	Variable Groundsel
<i>Isolepis fluitans</i>	Floating Club-sedge	<i>Senecio psilocarpus</i>	Swamp Fireweed
<i>Juncus procerus</i>	Tall Rush	<i>Stellaria angustifolia</i> subsp. <i>angustifolia</i>	Swamp Starwort
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass	<i>Urtica incisa</i>	Scrub Nettle
<i>Leptinella reptans</i> s.s.	Creeping Cotula		

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Where indicated, assess cover values only within the zones where the relevant life-form is consistently present.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium aquatic herbs	3	30	within relevant zones
Medium (to tall) sedges/rushes	3	20	within relevant zones
Medium grasses	3	+	overall
Small (to medium) semi-aquatic herbs	12	10	overall

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus geniculatus</i>	Marsh Fox-tail
<i>Atriplex prostrata</i>	Hastate Orache
<i>Cirsium vulgare</i>	Spear Thistle
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Lotus subbiflorus</i>	Hairy Bird's-foot Trefoil
<i>Lythrum junceum</i>	Mediterranean Loosestrife
<i>Mentha pulegium</i>	Pennyroyal
<i>Nasturtium officinale</i>	Watercress
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa pratensis</i>	Kentucky Blue-grass
<i>Potentilla anserina</i>	Silverweed
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where locally dominant to sub-dominant within relevant zones, score each life-form independently and average values

Structural dominants	Benchmark cover
Medium (to tall) sedges/rushes (mainly <i>Carex</i> spp. and <i>Juncus procerus</i>)	40%
Aquatic to semi-aquatic herbs (wide range of species, but especially <i>Ornduffia reniformis</i> and <i>Cycnogeton</i> spp.)	60%

EVC 806: Alluvial Plains Semi-arid Grassland

Description

Turf grassland (to herbland) of low-lying areas within relatively elevated riverine terraces. Shrubs incidental if present. Flood-promoted flora that potentially includes a wide range of opportunistic ephemeral/annual species. Localised to riverine areas in north-western Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Brachyscome</i> spp.	Daisy
<i>Calocephalus sonderi</i>	Pale Beauty-heads
<i>Plantago cunninghamii</i>	Clay Plantain
<i>Sclerochlamys brachyptera</i>	Short-wing Saltbush
<i>Sporobolus mitchellii</i>	Rat-tail Couch

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Small shrubby component may be absent in low-lying sites near major waterbodies without compromising scoring.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Rhizomatous/stoloniferous grasses	1	+	substantially modified if restricted to very few individual plants (during dry periods - if occasional dried stems are not evident)
Small (to medium) herbs	4	+	especially annuals (may be minute), substantially modified if restricted to very few individual plants, and not evident as, at least, scattered plants
Small prostrate shrubs and semi-shrubs	1	1	substantially modified if restricted to isolated specimens (<1% cover)

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Bromus rubens</i>	Red Brome
<i>Hordeum glaucum</i>	Northern Barley-grass
<i>Medicago minima</i>	Little Medic
<i>Mesembryanthemum nodiflorum</i>	Small Ice-plant
<i>Parapholis incurva</i>	Coast Barb-grass
<i>Schismus barbatus</i>	Arabian Grass
<i>Suaeda baccifera</i>	Berry Seablite

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% Cover	Scale of severity
Invasion by samphires (e.g. Blackseed Glasswort <i>Tecticornia pergranulata</i>) under conditions of altered hydrology.	<1%	Minor
	1-5%	Moderate
	>5%	Severe
Invasion by lignum (more than incidental lignum regeneration evident – i.e. as invasion zone). If adult plants present >5% cover, check against EVC A123 Alluvial Plains Semi-arid Shrubland.		Moderate
Invasion by Cumbungi <i>Typha domingensis</i> under conditions of altered hydrology. Present within main body of community.		Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominants	Benchmark cover for structural dominant
Pale Beauty-heads <i>Calocephalus sonderi</i> and/or Rat-tail Couch <i>Sporobolus mitchellii</i>	Assess for scoring category of >50% of benchmark cover (due to seasonal variability)

EVC A123: Alluvial Plains Semi-arid Shrubland (aka EVC 808 Lignum Shrubland)

Description:

Relatively open shrubland of species of twiggy growth form. The ground-layer is typically herbaceous or a turf grassland, rich in annual/ephemeral herbs and small chenopods. North-western areas of Victoria, mainly riverine. The prior name 'Lignum Shrubland' was misleading, as Tangled Lignum is not a consistent component of the relevant vegetation and created confusion with EVC 104 Lignum Swamp.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Duma florulenta</i>	Tangled Lignum
<i>Duma horrida</i> subsp. <i>horrida</i>	Spiny Lignum
<i>Eragrostis australasica</i>	Cane Grass
<i>Chenopodium nitrariaceum</i>	Nitre Goosefoot

Associated species for riverine Alluvial Plains Semi-arid Shrubland

<i>Atriplex leptocarpa</i>	Slender-fruit Saltbush
<i>Brachyscome ciliaris</i>	Variable Daisy
<i>Brachyscome lineariloba</i>	Hard-head Daisy
<i>Bulbine semibarbata</i>	Leek Lily
<i>Calocephalus sonderi</i>	Pale Beauty-heads
<i>Calotis hispidula</i>	Hairy Burr-daisy
<i>Duma florulenta</i>	Tangled Lignum
<i>Goodenia</i> spp.	Goodenia
<i>Isoetopsis graminifolia</i>	Grass Cushion
<i>Plantago cunninghamii</i>	Clay Plantain
<i>Rhodanthe corymbiflora</i>	Paper Sunray
<i>Sclerochlamys brachyptera</i>	Short-wing Saltbush
<i>Senecio glossanthus</i> s.l.	Slender Groundsel
<i>Sporobolus mitchellii</i>	Rat-tail Couch
<i>Tetragonia moorei</i>	Annual Spinach

Associated species for tall cane grass Alluvial Plains Semi-arid Shrubland (Chirrup Swamp, Birchip, where transitional towards Cane Grass dominated Lignum Swamp)

<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Epilobium billardierianum</i>	Variable Willow-herb
<i>Eragrostis australasica</i>	Cane Grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Senecio runcinifolius</i>	Tall Fireweed

Associated species for tall cane grass Alluvial Plains Semi-arid Shrubland (further north-west)

<i>Asperula gemella</i>	Twin-leaf Bedstraw
<i>Chenopodium nitrariaceum</i>	Nitre Goosefoot
<i>Eleocharis pallens</i>	Pale Spike-sedge

<i>Eragrostis australasica</i>	Cane Grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Senecio runcinifolius</i>	Tall Fireweed

Notes on indicator species

Duma florulenta and/or *Chenopodium nitrariaceum* (sometimes *Eragrostis australasica*) with diverse ground-layer of small chenopods and annual herbs in far north-west, more grassy-herbaceous in character in the southern Mallee.

Conditions when the EVC should not be assessed

None recognised. However, it should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Prostrate semi-shrubs	1	+	mostly chenopods, substantially modified if restricted to very few individuals and not dispersed through vegetation
Small (to medium) herbs	5	5	mainly small, especially annuals
Medium (to small) shrubs or tall robust cane-grass	1	5	substantially modified if <5% cover and evidence of dieback present
Medium to small non-tufted graminoids	2	+	substantially modified if restricted to very few individuals and not dispersed through vegetation

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Bromus rubens</i>	Red Brome
<i>Hordeum</i> spp.	Barley Grass
<i>Medicago minima</i>	Little Medic

Conditions where weeds are considered to have a negligible impact

None recognised, but note conditions when the EVC should not be assessed.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% Cover	Scale of severity
Invasion by drier habitat shrubby spp. (e.g. <i>Enchylaena tomentosa</i> , <i>Rhagodia spinescens</i> , <i>Sclerolaena tricuspis</i>)	1-5 % combined	Minor
	5-10% combined	Moderate
	>10% combined	Severe
Invasion by samphires (<i>Tecticornia pergranulata</i>)	<1%	Minor
	1-5%	Moderate
	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominants	Benchmark cover for structural dominant
Medium (to small) shrubs or robust cane grass, variously Cane Grass <i>Eragrostis australasica</i> , Nitre Goosefoot <i>Chenopodium nitrariaceum</i> , Spiny Lignum <i>Duma horrida</i> subsp. <i>horrida</i> and/or Tangled Lignum <i>Duma florulenta</i>	10

EVC 239: Alpine Creekline Herbland

Description:

Dense herbland vegetation, dominated by *Celmisia sericophylla*, occurring along heads of alpine drainage-lines. Rare, confined to Bogong High Plains.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Celmisia sericophylla</i>	Silky Snowy-daisy	gaps or more open stands variously with the following:
<i>Carpha</i> spp.	Flower-rush	
<i>Epacris</i> spp.	Heath	
<i>Juncus falcatus</i>	Sickle-leaf Rush	
<i>Luzula atrata</i>	Slender Woodrush	
<i>Luzula modesta</i>	Southern Woodrush	
<i>Myriophyllum pedunculatum</i>	Mat Water-milfoil	
<i>Oreomyrrhis</i> spp.	Caraway	
<i>Plantago</i> spp.	Plantain	
<i>Poa</i> spp.	Tussock Grass	
<i>Psychrophila introloba</i>	Alpine Marsh-marigold	
<i>Schoenus</i> spp.	Bog-sedge	

Conditions when the EVC should not be assessed

More than superficial snow cover present.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium herbs	1	30	
Small (to medium) sedges and rushes	3	5	
Small (to tiny) herbs	3	5	

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Celmisia sericophylla</i>	60%

EVC 171: Alpine Fen

Description

Sedgeland vegetation of high elevation wetland basins subject to cold-air accumulation, often in shallow ponds occurring in association with sphagnum dominated bogs. Localised within higher mountain areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Carex gaudichaudiana</i>	Fen Sedge
<i>Isolepis crassiuscula</i>	Alpine Club-sedge
<i>Myriophyllum pedunculatum</i>	Mat Water-milfoil

Conditions when the EVC should not be assessed

More than superficial snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small herbs	1	+	mat-forming, any cover, substantially modified if restricted to very few individuals
Medium sedges	1	+	any cover, substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	Scale of severity
Channelisation apparent	Moderate
Channelisation apparent. Invasion of non-bog vegetation is apparent.	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform separately, where dominant, and average. Include apparent former extent of structural dominants (where it is obvious that fen previously existed). Treat dead leaves from previous season as healthy, especially soon after snow melt.

Structural dominant	Benchmark cover
Fen Sedge <i>Carex gaudichaudiana</i>	25% where the species is dominant
Mat Water-milfoil <i>Myriophyllum pedunculatum</i> and/or Alpine Club-sedge <i>Isolepis crassiuscula</i>	25% where the species are dominant

EVC 288: Alpine Heath Peatland

Description

Dwarf heathland of high altitude valley floors. Typically dominated by *Epacris glacialis* and growing on remnant peatland on the margins of alpine wetlands, streams and bogs. Rare, on higher mountains.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Astelia alpina</i> var. <i>novae-hollandiae</i>	Silver Astelia
<i>Carex breviculmis</i>	Common Grass-sedge
<i>Empodisma minus</i>	Spreading Rope-rush
<i>Epacris glacialis</i>	Reddish Bog-heath
<i>Gentianella</i> spp.	Snow Gentian
<i>Oreobolus distichus</i>	Fan Tuft-rush
<i>Poa costiniana</i>	Bog Snow-grass
<i>Ranunculus gunnianus</i>	Gunn's Alpine Buttercup
<i>Stackhousia pulvinaris</i>	Alpine Stackhousia

Conditions when the EVC should not be assessed

More than superficial snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small shrubs	1	30
Small (to medium) herbs	4	10
Small (to medium) non-tufted graminoids	1	20
Small (to medium) tufted graminoids	2	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small shrub, <i>Epacris glacialis</i>	60%

EVC 1011: Alpine Hummock Peatland

Description

The vegetation (at least in relatively intact sites) is characterised by elevated hummocks of *Sphagnum* moss in association with peat soils. A small range of low ericoid shrubs are typically immersed within the moss bed. Where mounds are less developed, floristic richness can be higher, potentially including a diverse range of small herbs and sedges. Localised to alpine and sub-alpine zones within higher mountains.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Astelia alpina</i>	Silver Astelia	
<i>Baeckea</i> spp.	Baeckea	
<i>Callistemon ptyoides</i>	Alpine Bottlebrush	
<i>Carex</i> spp.	Sedge	
<i>Carpha</i> spp.	Flower Rush	
<i>Dracophyllum continentis</i>	Candle Heath	
<i>Empodisma minus</i>	Spreading Rope-rush	
<i>Epacris</i> spp.	Heath	
<i>Epilobium</i> spp.	Willow Herb	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Lobelia surrepens</i>	Mud Pratia	
<i>Ranunculus</i> spp.	Buttercup	notably <i>R. pimpinellifolius</i> and <i>R. gunnianus</i>
<i>Sphagnum</i> spp.	Peat Moss	

Conditions when the EVC should not be assessed

More than superficial snow cover. Exercise discretion when bog very wet to minimise trampling damage.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

All groups substantially modified if restricted to isolated individuals or less than critical numbers indicated below.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Bryophyte	1	40	<i>Sphagnum</i> moss, substantially modified if restricted to isolated patches
Small (to medium) non-tufted sedges and rushes	1	+	substantially modified if restricted to very few plants and not at least scattered through vegetation
Small (to medium) shrubs	1	+	substantially modified if restricted to very few plants and not at least scattered through vegetation

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Note: include humic peat mounds colonized by *Empodisma minus* within area of exposed humic peat.

Indicators	Scale of severity
Exposed humic peat restricted to margins, major channels and bog verges. Bare ground <10% cover.	Minor
Some fragmentation of Sphagnum cover evident (e.g. exposed humic banks showing), channelisation process clearly active.	Moderate
Linked eroded channels clearly evident, Sphagnum reduced to small isolated patches, abundant exposed humic peat or silty gravel.	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Benchmark cover is for both areas of Peat Moss *Sphagnum* spp. and any areas of humic peat which were clearly prior *Sphagnum* mounds.

Structural dominant	Benchmark cover
Sphagnum moss <i>Sphagnum</i> spp	80%

EVC 905: Alpine Short Herbland

Description

Dwarf herbland of wet alpine soils, in sites with a short growing season. Typically found in areas of late-lying snow. Rare and localised, on higher mountains.

Indicator species (some or all of these species should be present)

Scientific name	Common name	
<i>Deyeuxia affinis</i>	Allied Bent-grass	less common
<i>Isolepis</i> spp.	Club Sedge	
<i>Juncus antarcticus</i>	Cushion Rush	
<i>Oreobolus pumilio</i> subsp. <i>pumilio</i>	Alpine Tuft-rush	
<i>Oreomyrrhis pulvinifica</i>	Cushion Caraway	
<i>Parantennaria uniceps</i>	Parantennaria	less common
<i>Plantago muelleri</i>	Star Plantain	
<i>Psychrophila introloba</i>	Alpine Marsh-marigold	
<i>Utricularia monanthos</i>	Tasmanian Bladderwort	

Conditions when the EVC should not be assessed

None except as imposed by snow cover and minimisation of trampling damage to vegetation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tiny herbs	4	+	Substantially modified if restricted to isolated patches
Tiny sedges and rushes	4	+	Substantially modified if restricted to very few plants

+ denotes presence

substantially modified if restricted to very few individuals

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Acetosella vulgaris</i>	Sheep Sorrel
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Dwarf species (tiny herbs and tiny sedges and rushes)	50%

EVC 306: Aquatic Grassy Wetland

Description:

Seasonal wetland on plains, dominated by rhizomatous to stoloniferous floating grasses, in association with mainly aquatic species. Turf grassland under drier conditions. Treeless or with scattered River Red-gum *Eucalyptus camaldulensis* present. Scattered, mainly in central southern to north-central areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	
<i>Amphibromus sinuatus</i>	Wavy Swamp Wallaby-grass	
<i>Crassula helmsii</i>	Swamp Crassula	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Lachnagrostis perennis</i> spp.agg.	Perennial Blown-grass	turf-forming species
<i>Myriophyllum</i> spp.	Water-milfoil	
<i>Pseudoraphis paradoxa</i>	Slender Mud-grass	very localised in East Gippsland

Conditions when the EVC should not be assessed

None recognised provided water depth and turbidity do not preclude visibility of submerged vegetation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Aquatic grasses	1	15	rhizomatous/stoloniferous
Aquatic to semi-aquatic herbs	3	5	
Small herbs	5	5	inundation tolerant, on verge

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Aponogeton distachyos</i>	Cape Pond-lily
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Nymphaea</i> spp.	Waterlily
<i>Paspalum distichum</i>	Water Couch
<i>Triglochin scilloides</i>	Lilaea
<i>Typha latifolia</i>	Lesser reed-mace

Conditions where weeds are considered to have a negligible impact

When system long-dry, set maximum cover contribution of annual species at 5- 25% level.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Scale of severity
Sporadic River Red-gum <i>Eucalyptus camaldulensis</i> regeneration evident in treeless areas	Moderate
Dense River Red-gum <i>Eucalyptus camaldulensis</i> regeneration within body of wetland	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Rhizomatous/stoloniferous grasses, principally Perennial Blown-grass <i>Lachnagrostis perennis</i> spp. agg. and Swamp Wallaby-grass <i>Amphibromus</i> spp., but excluding introduced species, notably Water Couch <i>Paspalum distichum</i>	30%

EVC 653: Aquatic Herbland

Description:

Semi-permanent to seasonal wetland vegetation, treeless (or nearly so), dominated by herbaceous aquatic species (typically with at least rootstocks tolerant of dry periods). Widespread, but rare in mountains and north-west.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Cyanogeton</i> spp.	Water Ribbons	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	Clove-strip	
<i>Myriophyllum</i> spp.	Water-milfoil	
<i>Nymphoides</i> spp.	Marshwort	
<i>Ornduffia reniformis</i>	Running Marsh-flower	
<i>Ranunculus inundatus</i>	River Buttercup	or related aquatic species

Conditions when the EVC should not be assessed

If wetland recently filled and aquatic growth obscured, or wetland dry for a sustained period (e.g. > 6 months) and floor of wetland is lacking evidence of aquatic plants.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tall (to medium) aquatic herbs	1	5	
Small (to medium) aquatic to semi-aquatic herbs	1	+	substantially modified if restricted to very few individuals and not clearly evident in the outer verge of the EVC

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Aponogeton distachyos</i>	Cape Pond-lily
<i>Cabomba caroliniana</i>	Cabomba
<i>Cotula coronopifolia</i>	Water Buttons
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Nymphaea</i> spp.	Waterlily
<i>Paspalum distichum</i>	Water Couch
<i>Rumex crispus</i>	Curled Dock
<i>Sagittaria</i> spp.	Sagittaria
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

Annual species on floor zone when thoroughly dry. When system long-dry, set maximum cover contribution of annual species at 5- 25% level.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore cover requirements (below) during drier phases where dieback occurs that is clearly due to desiccation. Often occurs in mosaic or complex with other wetland EVCs.

Structural dominant	Benchmark cover
Tall to medium aquatic herbs, any combination of Running Marsh-flower <i>Ornduffia reniformis</i> , River Buttercup <i>Ranunculus inundatus</i> , Clove-strip <i>Ludwigia peploides</i> subsp. <i>montevidensis</i> , Water Ribbons <i>Cychnogeton</i> spp., Water-milfoil <i>Myriophyllum</i> spp., Marshwort <i>Nymphoides</i> spp.	Assess for scoring category of >50% of benchmark cover

EVC 308: Aquatic Sedgeland

Description:

Very species-poor vegetation dominated by one to several species of robust inundation-tolerant rhizomatous sedges, typically with culms septate or otherwise including large air-spaces, with vegetative growth extending into virtually permanent water. Widespread, but rare in mountains and drier north.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Chorizandra australis</i>	Southern Bristle-sedge	
<i>Chorizandra cymbaria</i> s.s.	Heron Bristle-sedge	
<i>Eleocharis sphacelata</i>	Tall Spike-sedge	
<i>Machaerina articulata</i>	Jointed Twig-sedge	
<i>Machaerina rubiginosa</i> s.l.	Soft Twig-rush	robust aquatic forms

Notes on indicator species

Various combinations of one or more of above species. Often occurs in association with Aquatic Herbland (EVC 653).

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Aquatic sedges	1	5

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cabomba caroliniana</i> var. <i>caroliniana</i>	Cabomba
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Nymphaea</i> spp.	Waterlily
<i>Salvinia molesta</i>	Salvinia

Conditions where weeds are considered to have a negligible impact

Annual species on floor zone when thoroughly dry. When system long-dry, set maximum cover contribution of annual species at 5- 25% level.

3. INDICATORS OF ALTERED PROCESSES

Indicators of altered process

None recognised – assess at maximum level if critical life-form grouping present.

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore senescence which is clearly due to desiccation from natural drying out.

Structural dominant	Benchmark cover
Soft Twig-rush <i>Machaerina rubiginosa</i> s.l. and/or Tall Spike-sedge <i>Eleocharis sphacelata</i> and/or Jointed Twig-sedge <i>Machaerina articulata</i> and/or Bristle Sedge <i>Chorizandra</i> spp.	Assess for scoring category of >50% benchmark cover

EVC 334: Billabong Wetland Aggregate

Description:

Collective label for the various zones of vegetation associated with lagoons/billabongs on floodplains. Relevant EVCs include Floodplain Wetland Aggregate (EVC 172) and wetter versions of the primarily terrestrial Floodplain Riparian Woodland (EVC 56). Other relevant EVC mapping units include Floodplain Riparian Woodland/Floodplain Wetland Mosaic and Floodplain Riparian Woodland/Billabong Wetland Mosaic. Recognizable components of Billabong Wetland Aggregate include Aquatic Herbland (EVC 653), Aquatic Sedgeland (EVC 308), Tall Marsh (EVC 821), Dwarf Floating Aquatic Herbland (EVC 949) and Floodway Pond Herbland (EVC 801). Major river systems, principally cooler areas.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs above.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Substantially modified if less than the critical number of species are present.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) aquatic herbs	3	+	
Medium (to tall) rushes/reeds	3	+	
Medium tufted grasses and sedges	2	+	
Small herbs	3	+	aquatic or tufted on mud-floors

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus</i> spp.	Fox Tail
<i>Cotula coronopifolia</i>	Water Buttons
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Cyperus eragrostis</i>	Drain flat-sedge
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Nymphaea</i> spp.	Waterlily
<i>Paspalum</i> spp.	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock
<i>Typha latifolia</i>	Lesser Reed-mace

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Scale of severity	
Invasion of woody species on treeless pond floors.	Scattered specimens	Moderate
	Dense regeneration	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score zones dominated by each lifeform separately and average. Ignore seasonal dieback of Cumbungi/reeds (i.e. score as healthy if senescent foliage is still relatively intact).

Structural dominant	Benchmark cover
Small aquatic herbs	Assess for scoring category of >50% benchmark cover
Small trees/tall shrubs e.g. <i>Melaleuca</i> spp., <i>Leptospermum</i> spp.	50%, if present (variable in presence).
Medium to tall rushes/reeds e.g. <i>Juncus</i> spp., <i>Phragmites australis</i> , <i>Typha</i> spp.	40%

EVC 369: Black Box Wetland

Description:

Black Box *Eucalyptus largiflorens* with a sedgy-herbaceous understorey including species indicative of wetland habitats. Seasonal to episodic swampy woodland, with aquatic and semi-aquatic species present within Black Box dominated vegetation. Rare, lower Loddon - Avoca area and Wimmera.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass	
<i>Amphibromus</i> spp.	Swamp Wallaby-grass	mainly <i>Amphibromus nervosus</i>
<i>Duma florulenta</i>	Tangled Lignum	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eucalyptus largiflorens</i>	Black Box	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Lobelia concolor</i>	Poison Pratia	
<i>Marsilea drummondii</i>	Common Nardoo	
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed	
<i>Ranunculus inundatus</i>	River Buttercup	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised other than ignore herbaceous component requirement during severe drought.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to medium) herbs	8	10
Small (to medium) sedges	3	5
Trees	1	5
Tufted grasses	2	20

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Helminthotheca echinoides</i>	Ox-tongue
<i>Melilotus indicus</i>	Sweet Melilot
<i>Mesembryanthemum crystallinum</i> s.s.	Common Ice-plant
<i>Mesembryanthemum nodiflorum</i>	Small Ice-plant
<i>Parapholis incurva</i>	Coast Barb-grass
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
Invasion by Tangled Lignum (more than incidental lignum regeneration evident i.e. as invasion zone). If adult plants present at >5% cover, check against Lignum Swampy Woodland.		Moderate
	Present, <1%	Minor
Invasion by samphires	1-5 %	Moderate
	>5 %	Severe
Invasion by <i>Typha</i> spp.	<1%	Moderate
	>1%	Severe
Ground layer dominated by Starry Goosefoot <i>Scleroblitum atriplicinum</i> and diversity low i.e. <8 spp.		Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Black Box <i>Eucalyptus largiflorens</i>	10%

EVC 875: Blocked Coastal Stream Swamp

Description:

Dense sedgeland, dominated by *Cladium procerum*, associated with blocked streams of calcareous coastal habitats. Rare in Victoria - Wilson's Promontory and south-western Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Cladium procerum</i>	Leafy Twig-sedge	dominant
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	scattered if present
<i>Typha domingensis</i>	Narrow-leaf Cumbungi	

Conditions when the EVC should not be assessed

None recognised.

CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs	3	+	Substantially modified if restricted to very few individuals
Tall sedges or Cumbungi	2	25	
Small (to medium) sedges	3	+	Substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore superficial die-back of *Typha* spp. relating to weather conditions.

Structural dominant	Benchmark cover
Narrow-leaf Cumbungi <i>Typha domingensis</i> and/or Leafy Twig-sedge <i>Cladium procerum</i>	50%

EVC 537: Brackish Aquatic Herbland

Description:

Submerged (to weakly emergent) herbland, including more salt-tolerant aquatic species in semi-attached floating mats. Scattered in inland and near-coastal areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Althenia</i> spp.	Water Mat
<i>Characeae</i> spp.	Stonewort
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis
<i>Myriophyllum muelleri</i>	Hooded Water-milfoil
<i>Myriophyllum verrucosum</i>	Red Water-milfoil
<i>Ruppia polycarpa</i>	Many-fruit Tassel
<i>Stuckenia pectinata</i>	Fennel Pondweed
<i>Thyridia repens</i>	Creeping Monkey-flower
<i>Triglochin striata</i>	Streaked Arrowgrass

Conditions when the EVC should not be assessed

Sustained dry periods (at least desiccated remains of aquatic species not evident).

CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Aquatic herbs	3	+	fine-leaved, floating, substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

Dry periods approaching conditions when the EVC should not be assessed.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Lignum invasion	incidental scattered plants	<1%	Minor
	dense regeneration	1-10%	Moderate
		>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess combined aquatic cover of listed species, if present.

Structural dominant	Benchmark cover
Hooded Water-milfoil <i>Myriophyllum muelleri</i> , Red Water-milfoil <i>Myriophyllum verrucosum</i> , Tassel <i>Ruppia</i> spp., Water Mat <i>Althenia</i> spp.	Assess for scoring category of >50% benchmark cover

EVC 934: Brackish Grassland

Description:

Grassland on sub-saline heavy soils, including dominants of Plains Grassland (and a portion of associated herbaceous species) in association with herbaceous species indicative of saline soils. Sometimes occurring as a fringing community on the verges of saline lakes. Scattered in southern lowland and plains areas, most communities critically endangered.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Calocephalus lacteus</i>	Milky Beauty-heads	
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower	
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Goodenia radicans</i>	Shiny Swamp-mat	
<i>Lobelia irrigua</i>	Salt Pratia	
<i>Poa labillardierei</i>	Common Tussock-grass	
<i>Poa poiformis</i>	Coast Tussock-grass	some coastal sites
<i>Rytidosperma</i> spp.	Wallaby Grass	
<i>Sebaea</i> spp.	Sebaea	
<i>Themeda triandra</i>	Kangaroo Grass	
<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium grasses	2	20	perennial, either tufted or mat-forming
Medium (to tall) herbs	3	+	substantially modified if restricted to very few individuals
Small herbs	5	+	substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Hordeum</i> spp.	Barley Grass
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Rumex crispus</i>	Curled Dock
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

If cover of perennial grasses is lower than the benchmark, but the cover of small native herbs is very high (e.g. >60%), assess for scoring category of >50% of benchmark cover.

Structural dominant	Benchmark cover
Perennial grasses, typically one or more of Kangaroo Grass <i>Themeda triandra</i> , Australian Salt-grass <i>Distichlis distichophylla</i> , Wallaby Grass <i>Rytidosperma</i> spp., Common Tussock-grass <i>Poa labillardierei</i> , Coast Tussock-grass <i>Poa poiformis</i>	30%

EVC 538: Brackish Herbland

Description

Low herbland dominated by species tolerant of mildly saline conditions and intermittent inundation. Scattered in inland and near-coastal areas, including estuarine sites.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Apium annuum</i>	Annual Celery
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Isolepis cernua</i>	Nodding Club-sedge
<i>Lachnagrostis</i> spp.	Blown Grass
<i>Lobelia irrigua</i>	Salt Pratia
<i>Ranunculus amphitrichus</i>	Small River Buttercup
<i>Ranunculus diminutus</i>	Brackish Plains Buttercup
<i>Samolus repens</i>	Creeping Brookweed
<i>Schoenus nitens</i>	Shiny Bog-sedge
<i>Sebaea</i> spp.	Sebaea
<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia

Conditions when the EVC should not be assessed

Assessment during either high water levels or sustained drought may underscore the vegetation. Do not assess if small herbs can no longer be detected.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Exempt from diversity requirements where dominated by *Wilsonia* spp.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Prostrate/small (to medium) herbs	3	25	
Small sedges	1	+	substantially modified if restricted to very few plants and not at least scattered through the vegetation

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Helminthotheca echinoides</i>	Ox-tongue
<i>Hordeum</i> spp.	Barley Grass
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Rumex crispus</i>	Curled Dock
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
Invasion by <i>Typha</i> spp. (Bulrush or Cumbungi) or samphire (e.g. <i>Tecticornia pergranulata</i>)	<1%	Minor
	1-5%	Moderate
	>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore die-back due to natural wetting and drying cycles.

Structural dominant	Benchmark cover
Small herbs, typically some combination of Salt <i>Pratia</i> <i>Lobelia irrigua</i> , Buttercup <i>Ranunculus</i> spp., <i>Sebaea Sebaea</i> spp. and <i>Wilsonia Wilsonia</i> spp.	50%

EVC 636: Brackish Lake Aggregate

Description:

Collective label for the various zones of vegetation associated with the floors and verges of brackish lakes. Identifiable components of the aggregate variously include Brackish Aquatic Herbland (EVC 537), Brackish Lake Bed Herbland (EVC 539), Brackish Herbland (EVC 538), Brackish Sedgeland (EVC 13) and Brackish Wetland (EVC 656). Mainly drier west and north of State.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs.

Conditions when the EVC should not be assessed

Interpret according to component EVCs.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

See component EVCs.

General comments on assessing critical lifeform groups

See component EVCs. As each EVC represents a biodiversity unit, if an overall score is required, use average from set of EVC scores (regardless of relative extent of EVCs).

2. WEEDS

See component EVCs.

3. INDICATORS OF ALTERED PROCESSES

As for component EVCs.

4. VEGETATION STRUCTURE AND HEALTH

See component EVCs.

EVC 539: Brackish Lake Bed Herbland

Description

Low herbland of salt-tolerant species developing on drying lake beds. Floristics can vary seasonally and can be in temporal phase with the unvegetated unit (open water/bare soil/mud). Localized in north and west, very rare in near coastal sites (e.g. Bellarine Peninsula, lower Latrobe wetlands).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Atriplex australasica</i>	Native Orache	
<i>Atriplex suberecta</i>	Sprawling Saltbush	
<i>Chenopodium glaucum</i>	Glaucous Goosefoot	
<i>Cressa australis</i>	Rosinweed	
<i>Eucalyptus camaldulensis</i>	River Red-gum	scattered living veteran trees of <i>E. camaldulensis</i> can be present around outer fringes and dead stags may be extensive through the vegetation
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice	
<i>Heliotropium curassavicum</i>	Smooth Heliotrope	
<i>Myriophyllum verrucosum</i>	Red Water-milfoil	
<i>Sporobolus mitchellii</i>	Rat-tail Couch	
<i>Sporobolus virginicus</i>	Salt Couch	
<i>Thyridia repens</i>	Creeping Monkey-flower	

Conditions when the EVC should not be assessed

Prolonged drought, where even dried remnants of herbs are not evident. Default to other relevant EVCs during inundated phases.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Prolonged drought conditions, if some indigenous life-forms evident then score as unmodified.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) herbs	2	+	substantially modified if restricted to very few individual plants
Grasses	1	+	substantially modified if restricted to very few individual plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Suaeda baccifera</i>	Berry Seablite

Conditions where weeds are considered to have a negligible impact

Annual grasses during prolonged dry periods. Note at this stage the EVC would generally be within conditions when it should not be assessed.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% cover	Scale of severity
Samphire invasion (on lake bed)	1-5%	Minor
	5-10%	Moderate
	>10%	Severe
Chenopod shrub invasion	(>30cm high) 1-5%	Minor
	(> 30 cm high) 5-10%	Moderate
	(> 30 cm high) >10%	Severe
Lignum invasion, incidental plants	<1%	Minor
Lignum invasion, evident with dense young plants	1-10%	Moderate
Lignum invasion	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

See conditions when the EVC should not be assessed.

4. VEGETATION STRUCTURE AND HEALTH

Ignore dieback due to natural drying cycles.

Structural dominant	Benchmark cover
Small to medium herbs, typically Red Water-milfoil <i>Myriophyllum verrucosum</i> , Creeping Monkey-flower <i>Thyridia repens</i> , Glaucous Goosefoot <i>Chenopodium glaucum</i> , Rosinweed <i>Cressa australis</i> .	Assess for scoring category of >50% of benchmark cover if indigenous herbs present, at least as scattered individuals

EVC 947: Brackish Lignum Swamp

Description:

Wetland dominated by *Duma florulenta* (variously with *Eragrostis infecunda*), with a component or patches of salt-tolerant herbs (at least at low to moderate levels of salinity) and usually also with some species shared with freshwater habitats. Can be very species-poor apart from introduced annuals. Sites with a higher diversity of salt-tolerant native species, at least around the drier outer verges, are generally presumed to have been somewhat saline prior to European settlement. However, species-poor character does not necessarily imply that the site is degraded or highly modified. Rare, lower rainfall plains in north and west and localized in coastal areas west of Melbourne.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Chenopodium glaucum</i>	Glaucous Goosefoot
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Duma florulenta</i>	Tangled Lignum
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Gahnia filum</i>	Chaffy Saw-sedge
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Isolepis cernua</i>	Nodding Club-sedge
<i>Lachnagrostis</i> spp.	Blown Grass
<i>Lobelia irrigua</i>	Salt Pratia
<i>Myriophyllum verrucosum</i>	Red Water-milfoil
<i>Samolus repens</i>	Creeping Brookweed
<i>Thyridia repens</i>	Creeping Monkey-flower
<i>Triglochin striata</i>	Streaked Arrowgrass
<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia

Conditions when the EVC should not be assessed

None recognised, subject to discretion based on recognition that this EVC may be underscored during prolonged droughts.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	1	10	
Medium (to tall) non-tufted grasses and sedges	2	+	rhizomatous/stoloniferous species
Medium to small or prostrate herbs	3	+	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Atriplex prostrata</i>	Hastate Orache
<i>Cotula coronopifolia</i>	Water Buttons
<i>Hordeum</i> spp.	Barley Grass
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock
<i>Symphotrichum subulatum</i>	Aster-weed
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% cover	Scale of severity
Samphire (<i>Tecticornia pergranulata</i>) invasion	<1%	Minor
	1-5%	Moderate
	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tangled Lignum <i>Duma florulenta</i>	20%

EVC 13: Brackish Sedgeland

Description:

Medium to tall sedgeland, dominated by salt-tolerant sedges in association with a low grassy/herbaceous ground-layer with a halophytic component. Scattered in near-coastal and western inland areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Bolboschoenus caldwellii</i>	Salt Club-sedge	in some wetter versions
<i>Gahnia filum</i>	Chaffy Saw-sedge	less commonly
<i>Gahnia trifida</i>	Coast Saw-sedge	
<i>Machaerina juncea</i>	Bare Twig-sedge	
<i>Schoenoplectus pungens</i>	Sharp Club-sedge	in some wetter versions

Notes on indicator species

Gahnia trifida (less commonly *Gahnia filum*) or *Machaerina juncea*; with *Bolboschoenus caldwellii* and/or *Schoenoplectus pungens* in some wetter versions (but note also EVC 656 Brackish Wetland).

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to small) herbs	5	5	
Medium (to tall) sedges	1	15	
Small (to tiny) monocots	3	+	various sedges, grasses and ephemerals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Hordeum</i> spp.	Barley Grass
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Parapholis</i> spp.	Barb Grass
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% cover	Scale of severity
Invasion of dryland species, loss of wetland component. <i>Rytidosperma</i> spp. present at:	<5%	Minor
	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) sedges, one or more of Saw-sedge <i>Gahnia</i> spp., Salt Club-sedge <i>Bolboschoenus caldwellii</i> , Sharp Club-sedge <i>Schoenoplectus pungens</i> or Bare Twig-sedge <i>Machaerina juncea</i>	30%

EVC 1114: Brackish Sedgy Shrubland

Description:

Sedgy shrubland vegetation with a minor component of halophytic species, occurring on faintly brackish coastal swales and flats with grey peaty sand subject to occasional shallow inundation. Rare, recorded with certainty only from far East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Apodasmia brownii</i>	Coarse Twine-rush
<i>Brachyscome graminea</i>	Grass Daisy
<i>Centella cordifolia</i>	Centella
<i>Deyeuxia densa</i>	Heath Bent-grass
<i>Drosera pygmaea</i>	Tiny Sundew
<i>Gonocarpus micranthus</i>	Creeping Raspwort
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Mat Grass
<i>Imperata cylindrica</i>	Blady Grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Linum marginale</i>	Native Flax
<i>Lobelia anceps</i>	Angled Lobelia
<i>Machaerina juncea</i>	Bare Twig-sedge
<i>Melaleuca armillaris</i>	Giant Honey-myrtle
<i>Rytidosperma semiannulare</i>	Wetland Wallaby-grass
<i>Samolus repens</i>	Creeping Brookweed
<i>Schoenus apogon</i>	Common Bog-sedge
<i>Schoenus nitens</i>	Shiny Bog-sedge
<i>Selaginella uliginosa</i>	Swamp Selaginella
<i>Senecio glomeratus</i>	Annual Fireweed
<i>Viminaria juncea</i>	Golden Spray

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) shrubs	2	5
Medium graminoids	8	30
Small graminoids	2	1
Small (to medium) herbs	12	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Erigeron sumatrensis</i>	Tall Fleabane
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Paspalum dilatatum</i>	Paspalum
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Setaria</i> spp.	Pigeon-grass
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) shrubs (primarily <i>Melaleuca armillaris</i>)	10%

EVC 973: Brackish Shrubland

Description:

Shrubland vegetation fringing claypans and shallow salt lakes, with the dominant species tolerant of lower levels of salinity, but ground-layer with a sparse grassy-herbaceous ground-layer with few if any halophytic species. Ephemerals are prevalent and indicative of seasonal waterlogging. Little Desert and nearby far south-west.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Acacia farinosa</i>	Mealy Wattle
<i>Austrostipa scabra</i>	Rough Spear-grass
<i>Centrolepis polygyna</i>	Wiry Centrolepis
<i>Centrolepis strigosa</i> subsp. <i>strigosa</i>	Hairy Centrolepis
<i>Daucus glochidiatus</i>	Australian Carrot
<i>Dichelachne crinita</i>	Long-hair Plume-grass
<i>Gahnia filum</i>	Chaffy Saw-sedge
<i>Hypolaena fastigiata</i>	Tassel Rope-rush
<i>Lepidosperma viscidum</i>	Sticky Sword-sedge
<i>Machaerina juncea</i>	Bare Twig-sedge
<i>Melaleuca brevifolia</i>	Mallee Honey-myrtle
<i>Millotia muelleri</i>	Common Bow-flower
<i>Pogonolepis muelleriana</i>	Stiff Cup-flower
<i>Rytidosperma geniculatum</i>	Knead Wallaby-grass
<i>Rytidosperma setaceum</i>	Bristly Wallaby-grass
<i>Rytidosperma semiannulare</i>	Wetland Wallaby-grass
<i>Sebaea ovata</i>	Yellow Sebaea
<i>Wahlenbergia gracilentia</i> s.l.	Annual Bluebell

Conditions when the EVC should not be assessed

None recognised, but small herbs may be underscored during prolonged dry conditions and seasonally over autumn and winter.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed.

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium shrubs	1	10
Small (to medium) herbs	4	2
Medium sedges and rush-like plants	3	10
Medium (to small) tufted grasses	3	5

2. WEEDS

High threat weeds

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium shrubs; Mallee Honey-myrtle <i>Melaleuca brevifolia</i> with or without Mealy Wattle <i>Acacia farinosa</i>	15%

EVC A131: Brackish Swampy Woodland

Description:

Woodland occupying the outer zone of treeless brackish wetland, with a ground-layer dominated by sedge species indicative and tolerant of brackish conditions. Poorly known, apparently very rare and recorded with certainty only from sandy soils abutting the volcanic plains north-west of Glen Thompson, adjacent to the south-eastern section of the Grampians.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Apodasmia brownii</i>	Coarse Twine-rush
<i>Calocephalus lacteus</i>	Milky Beauty-heads
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Ficinia nodosa</i>	Knobby Club-sedge
<i>Gahnia filum</i>	Chaffy Sword-sedge
<i>Juncus australis</i>	Austral Rush
<i>Juncus pallidus</i>	Pale Rush

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed.

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	20	substantially modified if living trees of at least medium size (>50 cm DBH) are infrequent to absent or dense regeneration thickets are present
Small (to medium) herbs	3	2	
Medium sedges and rush-like plants	5	20	
Medium (to small) non-tufted grasses	1	2	

2. WEEDS

High threat weeds

Scientific name	Common name
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	40%

EVC 656: Brackish Wetland Aggregate

Description:

Collective label for the various zones of sedgy-herbaceous vegetation associated with sub-saline wetlands. Components variously include wetter versions of Brackish Sedgeland (EVC 13), Brackish Herbland (EVC 538) and Saline Aquatic Meadow (EVC 842). Mainly western and northern areas, but also scattered sites on coastal plains.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs above; in addition *Juncus kraussii* subsp. *australiensis* can be conspicuous in some variants.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium aquatic to semi-aquatic herbs	3	15
Small (to prostrate) herbs	5	10
Medium (to tall) graminoids	3	10
Small (to prostrate) sedges and grasses	3	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Apium graveolens</i>	Celery
<i>Symphyotrichum subulatum</i>	Aster-weed
<i>Cotula coronopifolia</i>	Water Buttons
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Hordeum</i> spp.	Barley Grass
<i>Parapholis</i> spp.	Barb Grass
<i>Paspalum distichum</i>	Water couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score areas where relevant lifeform is dominant separately according to benchmark covers, and average scores. Ignore die-back of herbaceous species due to natural wetting and drying cycles or drought conditions.

Structural dominant	Benchmark cover
Small herbs, often mat-forming species	40%
Medium (to tall) sedges/rushes	20%
Small sedges	5%

EVC A106: Calcareous Sedgy Shrubland

Description:

Stunted shrubland with a conspicuous sedge component, occurring in coastal barrier swamps on calcareous soils. The activities of yabbies are a conspicuous influence on the soils. Very localised, apparently confined to the far south-west of the State, where greatly reduced by recent hydrological interventions.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Cassytha glabella</i>	Slender Dodder-laurel
<i>Comesperma volubile</i>	Love Creeper
<i>Euphrasia collina</i> subsp. <i>collina</i>	Purple Eyebright
<i>Gahnia trifida</i>	Coast Saw-sedge
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Hydrocotyle pterocarpa</i>	Wing Pennywort
<i>Lepidosperma neesii</i>	Stiff Rapier-sedge
<i>Leptospermum lanigerum</i>	Woolly Tea-tree
<i>Lobelia anceps</i>	Angled Lobelia
<i>Logania ovata</i>	Oval-leaf Logania
<i>Prasophyllum frenchii</i>	Maroon Leek-orchid
<i>Schoenus nitens</i>	Shiny Bog-sedge
<i>Thysanotus patersonii</i>	Twining Fringe-lily

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall shrubs	1	25
Medium to tall sedges	3	10
Scramblers	1	+
Medium to tall herbs	5	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by Coast Wattle (<i>Acacia longifolia</i> subsp. <i>sophorae</i>)	Incidental plants	Negligible
	Scattered plants	<5%
	Frequent plants	>5%

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Leptospermum lanigerum</i>	20%

EVC 591: Calcareous Wet Herbland

Description

Low wetland vegetation dominated by inundation tolerant herbs. The floristics are indicative of calcareous conditions. Rare, southern lowland areas, mostly in the south-west.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus recurvatus</i>	Dark Swamp Wallaby-grass
<i>Asperula subsimplex</i>	Water Woodruff
<i>Goodenia humilis</i>	Swamp Goodenia
<i>Hydrocotyle muscosa</i>	Mossy Pennywort
<i>Hydrocotyle pterocarpa</i>	Wing Pennywort
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Juncus procerus</i>	Tall Rush
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis
<i>Liparophyllum exaltatum</i>	Erect Marsh-flower
<i>Machaerina arthropophylla</i>	Fine Twig-sedge
<i>Ornduffia</i> spp.	Marsh Flower
<i>Ranunculus</i> spp.	Buttercup

Notes on indicator species

Sparse emergent *Machaerina arthropophylla* and/or *Juncus procerus* are sometimes present.

Conditions when the EVC should not be assessed

None recognised (possibly during deeper inundation events) if wetland floor vegetation obscured.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) graminoids	3	+	
Small (to medium) herbs	7	25	mat-forming

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus geniculatus</i>	Marsh Fox-tail
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% Cover	Scale of severity
Shrub invasion (Swamp Paperbark <i>Melaleuca ericifolia</i> /Tea Tree <i>Leptospermum</i> spp.).	Invasion front of shrubs evident in outer margins of herbaceous zone.	Moderate
	Shrubs conspicuous in treeless areas >5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominants	Benchmark cover
Small to medium herbs, primarily Floating Club-sedge <i>Isolepis fluitans</i> , Swamp Goodenia <i>Goodenia humilis</i> , Water Woodruff <i>Asperula subsimplex</i> , Australian Lilaeopsis <i>Lilaeopsis polyantha</i> , Pennywort <i>Hydrocotyle</i> spp.	50%

EVC 291: Cane Grass Wetland

Description:

Species-poor vegetation dominated by Southern Cane-grass *Eragrostis infecunda* occurring in association with seasonal wetlands of low rainfall plains areas, typically on extremely heavy, grey clay soils. Scattered in drier plains areas in the west and north of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eragrostis infecunda</i>	Southern Cane-grass	variously with <i>Eleocharis acuta</i> , <i>Potamogeton tricarinatus</i> s.l., <i>Lachnagrostis filiformis</i> s.s.

Conditions when the EVC should not be assessed

None recognised, but may underscore following protracted drought conditions.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Representation of groups (other than Cane-grass) required on verges only.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Cane grass	1	5	
Aquatic herbs or medium sedges	2	+	
Small (to medium) semi-aquatic herbs	5	10	on verges

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name	Comments
<i>Alisma lanceolatum</i>	Water Plantain	
<i>Hordeum</i> spp.	Barley Grass	on verges
<i>Triglochin scilloides</i>	Toowoomba Canary-grass	on verges
<i>Triglochin scilloides</i>	Lilaea	on verges

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Southern Cane-grass <i>Eragrostis infecunda</i>	10%

EVC A117: Cane Grass Wetland/Alluvial Plains Semi-arid Shrubland Complex

Description:

Wetland vegetation dominated by a mixture of Southern Cane-grass and shrub or shrub-like species indicative of Alluvial Plains Semi-arid Shrubland (EVC A123) - notably Cane Grass, with a minor component of Tangled Lignum and/or Nitre Goosefoot. It occurs on heavy soils in low-rainfall habitat that is prone to shallow intermittent inundation. Apparently very rare and localised, known only from the riverine plain south-west of Echuca.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Calocephalus sonderi</i>	Pale Beauty-heads
<i>Chenopodium nitrariaceum</i>	Nitre Goosefoot
<i>Cressa australis</i>	Rosinweed
<i>Duma florulenta</i>	Tangled Lignum
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eragrostis australasica</i>	Cane Grass
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Ranunculus pumilio</i>	Ferny Small-flower Buttercup
<i>Rumex tenax</i>	Narrow-leaf Dock
<i>Senecio runcinifolius</i>	Tall Fireweed

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, other than it may not be practicable to adequately assess the vegetation if it is inundated with turbid water during flood conditions.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Cane grasses	2	20	
Medium (to tall) shrubs	2	+	on verges, substantially modified if restricted to very few plants
Medium graminoids (non cane grass)	2	1	on verges
Aquatic to semi-aquatic herbs	2	+	on verges, substantially modified if restricted to very few plants
Non-aquatic herbs (primarily annuals)	3	+	substantially modified if restricted to very few plants

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lolium rigidum</i>	Wimmera Rye-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Invasion by chenopods (e.g. *Sclerolaena muricata*) and other non-wetland species.

Indicator of altered process		Cover	Scale of severity
Invasion by chenopods (e.g. <i>Sclerolaena muricata</i>) and other non-wetland species	Incidental plants	Negligible	Minor
	Scattered plants	<5%	Moderate
	Frequent plants	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Cane grasses	40%

EVC 602: Cane Grass Wetland/Aquatic Herbland Complex

Description

Wetland vegetation with open stands of Southern Cane-grass in association with freshwater aquatic herbs. Rare, scattered localities in the west and north of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass
<i>Crassula helmsii</i>	Swamp Crassula
<i>Cycnogeton</i> spp.	Water Ribbons
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Juncus holoschoenus</i>	Joint-leaf Rush
<i>Lachnagrostis filiformis</i> s.s	Common Blown-grass
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis
<i>Myriophyllum</i> spp.	Water-milfoil
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed
<i>Ranunculus</i> spp.	Buttercup
<i>Rumex bidens</i>	Mud Dock
<i>Stellaria angustifolia</i> subsp. <i>angustifolia</i>	Swamp Starwort

Conditions when the EVC should not be assessed

At least dried fragments of herbaceous species not evident following sustained drought.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Cane grass	1	5	substantially modified if less than benchmark cover towards outer margins
Aquatic herbs	3	15	
Medium (to small) graminoids	3	5	often semi-aquatic, towards verge zone
Small (to medium) herbs	5	10	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alisma lanceolatum</i>	Water Plantain
<i>Hordeum</i> spp.	Barley Grass
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Lilaea scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess species and lifeform separately and average scores. Note conditions when the EVC should not be assessed.

Structural dominant	Benchmark cover
Aquatic herbs	30%
Southern Cane-grass <i>Eragrostis infecunda</i>	5%

EVC 606: Cane Grass Wetland/Brackish Herbland Complex

Description

Wetland dominated by open stands of Southern Cane-grass in association with herbaceous species characteristic of inundation-prone brackish sites. Scattered in western areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Calocephalus lacteus</i>	Milky Beauty-heads	in marginal sites
<i>Eragrostis infecunda</i>	Southern Cane-grass	dominant
<i>Goodenia radicans</i>	Shiny Swamp-mat	
<i>Lachnagrostis</i> spp.	Blown Grass	
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis	
<i>Lobelia irrigua</i>	Salt Pratia	
<i>Myriophyllum verrucosum</i>	Red Water-milfoil	
<i>Puccinellia perlaxa</i>	Plains Saltmarsh-grass	
<i>Samolus repens</i>	Creeping Brookweed	
<i>Sebaea albidiflora</i>	White Sebaea	
<i>Sporobolus virginicus</i>	Salt Couch	in marginal sites
<i>Stellaria angustifolia</i> subsp. <i>angustifolia</i>	Swamp Starwort	in marginal sites
<i>Thyridia repens</i>	Creeping Monkey-flower	
<i>Triglochin striata</i>	Streaked Arrowgrass	
<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia	

Conditions when the EVC should not be assessed

None recognised, but may underscore following sustained drought.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Cane grass	1	5	substantially modified if cover (5%) towards outer edges is lower than benchmark
Small (to medium) grasses and sedges	3	5	rhizomatous or stoloniferous
Small (to medium) herbs	5	15	often mat-forming

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alisma lanceolatum</i>	Water Plantain
<i>Hordeum</i> spp.	Barley Grass
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess species and lifeform separately and average scores.

Structural dominant	Benchmark cover
Small to medium herbs	30%
Southern Cane-grass <i>Eragrostis infecunda</i>	10%

EVC 284: Claypan Ephemeral Wetland

Description:

Herb dominated vegetation in shallow, seasonally-inundated habitat on cracking silty clays (within Alluvial Terraces Herb-rich Woodland), with a range of small herbs indicative of wetness, in particular ephemeral monocots. Localised in further west in the vicinity of the Grampians.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Aphelia</i> spp.	Aphelia	
<i>Brachyscome perpusilla</i>	Rayless Daisy	
<i>Centrolepis</i> spp.	Centrolepis	
<i>Eragrostis brownii</i>	Common Love-grass	
<i>Eucalyptus camaldulensis</i>	River Red-gum	marginal
<i>Goodenia humilis</i>	Swamp Goodenia	
<i>Leptospermum scoparium</i>	Manuka	sparse
<i>Myriocephalus rhizocephalus</i>	Woolly-heads	
<i>Rytidosperma geniculatum</i>	Kneed Wallaby-grass	
<i>Stylidium</i> spp.	Trigger Plant	

Conditions when the EVC should not be assessed

None evident, but may be underscored following prolonged dry conditions.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

When approaching conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium grasses/sedges/rushes	3	10	tufted and non-tufted
Medium herbs	5	10	
Small (to tiny) herbs and sedges	5	5	mainly ephemerals

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform separately and average.

Structural dominant	Benchmark cover
Small to tiny herbs and sedges	10%
Medium graminoids	20%

EVC A110: Coastal Dry Saltmarsh

Description:

Herbland to low shrubland of upper coastal saltmarsh in lower rainfall areas, subject to relatively infrequent tidal inundation or sometimes in remnant near coastal lacustrine sites which no longer have direct access to tidal inundation events. Localised and severely depleted, Bellarine Peninsula, Western Port Phillip Bay, head of Western Port and Lake Reeve.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Angianthus preissianus</i>	Salt Angianthus	
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower	
<i>Frankenia pauciflora</i>	Southern Sea-heath	
<i>Salicornia blackiana</i>	Thick-head Glasswort	
<i>Sebaea albidiflora</i>	White Sebaea	rare dominant
Associated species, variously		
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Hemichroa pentandra</i>	Trailing Hemichroa	
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	
<i>Samolus repens</i>	Creeping Brookweed	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, however small herbs may be difficult to detect outside of a period around the spring season.

General comments on assessing critical lifeform groups

Require at least two of alternatives

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to small succulent herbs	2	25
Annual herbs	1	1
Small shrubs	1	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Atriplex prostrata</i>	Hastate Orache
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Combined cover small shrubs, succulent herbs and annual herbs	50%

EVC 976: Coastal Ephemeral Wetland

Distribution

Range of moisture requiring herbs in association with species of moister dryland grassy vegetation. Extremely rare, known only from Mornington Peninsula and possibly Phillip Island. Could also be regarded as a variant of Swampy Woodland (EVC 937).

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Acacia melanoxylon</i>	Blackwood
<i>Acaena novae-zelandiae</i>	Bidgee-widgee
<i>Amphibromus archeri</i>	Pointed Swamp Wallaby grass
<i>Centella cordifolia</i>	Centella
<i>Deyeuxia quadriseta</i>	Reed Bent-grass
<i>Elatine gratioloides</i>	Waterwort
<i>Eragrostis brownii</i>	Common Love-grass
<i>Eucalyptus ovata</i> subsp. <i>ovata</i>	Swamp Gum
<i>Gratiola peruviana</i>	Austral Brooklime
<i>Haloragis heterophylla</i>	Varied Raspwort
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Mat Grass
<i>Isolepis platycarpa</i>	Broad-fruit Club-sedge
<i>Isotoma fluviatilis</i> subsp. <i>australis</i>	Swamp Isotome
<i>Juncus holoschoenus</i>	Joint-leaf Rush
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Mazus pumilio</i>	Swamp Mazus
<i>Ozothamnus ferrugineus</i>	Tree Everlasting
<i>Poa clelandii</i>	Noah's Ark
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Rytidosperma semiannulare</i>	Wetland Wallaby-grass
<i>Schoenus apogon</i>	Common Bog-sedge

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to small) semi-aquatic herbs	4	5
Medium (to tall) tufted graminoids	3	15
Tall shrubs (to small trees)	3	5
Trees	1	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Alopecurus</i> spp.	Fox Tail
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Festuca arundinacea</i>	Tall Fescue
<i>Genista linifolia</i>	Flax-leaf Broom
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Psoralea pinnata</i>	Blue Psoralea
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Swamp Gum <i>Eucalyptus ovata</i> subsp. <i>ovata</i>	10%

EVC A111: Coastal Hypersaline Saltmarsh

Description:

Low shrubland dominated by succulent chenopods (or rarely Thorny Lawrencia), occurring in highly hypersaline coastal saltmarsh habitat above the zone of regular tides. Extremely localised in Western Port Phillip Bay and on the Bellarine Peninsula, with a community dominated by *Tecticornia pergranulata* subsp. *pergranulata* also occurring at Lake Reeve in Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower	less frequent associate
<i>Frankenia pauciflora</i>	Southern Sea-heath	
<i>Lawrencia squamata</i>	Thorny Lawrencia	very localised
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	
<i>Samolus repens</i>	Creeping Brookweed	less frequent associate
<i>Suaeda australis</i>	Austral Seablite	less frequent associate
<i>Tecticornia halocnemoides</i> subsp. <i>halocnemoides</i>	Grey Glasswort	
<i>Tecticornia pergranulata</i> subsp. <i>pergranulata</i>	Blackseed Glasswort	
<i>Tecticornia</i> sp. (Connewarre)	Bellarine Glasswort	

Notes on indicator species

A range of indigenous annuals can be present in relatively intact sites, e.g. on low mounds associated with *Tecticornia halocnemoides* subsp. *halocnemoides*.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to small or prostrate shrubs	1	10
Medium to small succulent herbs (at least towards perimeter of zone)	1	5

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Tecticornia</i> spp.	20%

EVC 11: Coastal Lagoon Wetland Aggregate

Description:

An aggregate EVC which includes the various zones of vegetation associated with sedge-fringed aquatic vegetation of near coastal lagoons. Components include Aquatic Sedgeland (EVC 308), Aquatic Herbland (EVC 653) and Swamp Scrub (EVC 53). Rare, further eastern Victoria, but possibly elsewhere along coast.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Cyanogeton</i> spp.	Water Ribbons
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Machaerina rubiginosa</i> s.l.	Soft Twig-rush
<i>Melaleuca squarrosa</i>	Scented Paperbark

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Assess cover only within zone where present

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) shrubs or small trees	2	25	at least one locally dominant in fringing vegetation
Aquatic herbs	2	5	locally at least sub-dominant towards fringes of wetland
Small (to medium) semi-aquatic herbs	3	+	Substantially modified if restricted to very few individuals
Tall non-aquatic graminoids	3	15	locally at least subdominant
Medium (to tall) aquatic sedges	2	10	locally dominant in respective zones

+ denotes presence

2. WEEDS

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where present, score each lifeform separately and average.

Structural dominant	Benchmark cover
Medium (to tall) shrubs	30%
Herbs	Assess for scoring category of >50% benchmark cover
Tall graminoids	30%

EVC A109: Coastal Saline Grassland

Description:

Grassland dominated by rhizomatous grasses (at best development forming mounds), occurring towards the upper zones of coastal saltmarsh. Restricted extent along the Victorian coastline, with scattered distribution but mostly between the Bellarine Peninsula and Western Port Bay.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Distichlis distichophylla</i>	Australian Salt-grass	particularly on heavier soils
<i>Ficinia nodosa</i>	Knobby Club-sedge	margins with <i>S. virginicus</i>
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	
<i>Sporobolus virginicus</i>	Salt-couch	particularly on sandier soils
<i>Triglochin striata</i>	Streaked Arrowgrass	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Non-tufted grasses	2	25

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Atriplex prostrata</i>	Hastate Orache
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Non-tufted grasses	50%

EVC 9: Coastal Saltmarsh Aggregate

Description:

Various low shrubby or herbaceous (to grassy or sedgy) vegetation of salinised coastal soils, in or adjacent to tidally influenced wetland. Coastal Saltmarsh Aggregate can include a number of zones of varying structure and floristics, reflecting the regimen of tidal inundation and substrate character. The potential component EVCs of Coastal Saltmarsh Aggregate include Wet Saltmarsh Herbland (EVC A107), Wet Saltmarsh Shrubland (EVC A108), Coastal Saline Grassland (A109), Coastal Dry Saltmarsh (A110), Coastal Hypersaline Saltmarsh (EVC A111), Coastal Tussock Saltmarsh (EVC A112) and Saltmarsh-grass Swamp (EVC A113). Scattered distribution in sheltered embayments and estuaries along the Victorian coast.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Austrostipa stipoides</i>	Prickly spear-grass
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Frankenia pauciflora</i>	Southern Sea-heath
<i>Gahnia filum</i>	Chaffy Saw-sedge
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
<i>Samolus repens</i>	Creeping Brookweed
<i>Suaeda australis</i>	Austral Seablite
<i>Tecticornia arbuscula</i>	Shrubby Glasswort
<i>Triglochin striata</i>	Streaked Arrowgrass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Life-forms should be assessed in such a way as to include the entire width of the saltmarsh. Cover values apply to the specific zones in which the relevant lifeform is conspicuous. Treat each component below as representative (i.e. if a particular lifeform is substantially modified in one of the two sets of zones below but not substantially modified in the other, then this records as two lifeforms present with one modified).

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
<i>Zones dominated by succulent chenopods/herbs:</i>			
Fleshy stemmed chenopods	1	20	not fleshy stemmed
Small (to medium) herbs	4	20	
Small (to medium) grasses	1	+	
<i>Zones dominated by large graminoids (excluding Juncus kraussii):</i>			
Medium (to large) tufted graminoids	1	20	may be fleshy stemmed
Small (to medium) herbs	5	+	
Medium non-tufted grasses	1	+	
Small (to medium) non-tufted graminoids	1	+	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Atriplex prostrata</i>	Hastate Orache
<i>Hordeum</i> spp.	Barley Grass
<i>Parapholis</i> spp.	Barb Grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Sporobolus anglica</i>	Common Cord-grass
<i>Sporobolus x townsendii</i>	Townsend's Cord-grass
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Invasion by White Mangrove <i>Avicennia marina</i>	Incidental seedlings	negligible	Minor
	Scattered seedlings	<1%	Moderate
	Frequent seedlings	>1%	Severe
Invasion by non-halophytic coastal species (e.g. <i>Senecio</i> spp., <i>Poa poiformis</i> , <i>Rhagodia candolleana</i> , <i>Myoporum insulare</i>)	Incidental plants	negligible	Minor
	Scattered plants	<1%	Moderate
	Frequent plants	>1%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Where respective zones are present, score each lifeform independently within its zone of dominance to co-dominance and average the values obtained.

Structural dominant	Benchmark cover
Small (to medium) fleshy-stemmed shrubs	15%
Fleshy-stemmed herbs	40%
Small (to medium) non-fleshy stemmed herbs	20%
Medium (to large) tufted graminoids (excluding <i>Juncus kraussii</i>)	40%
Medium non-tufted grasses	30%

EVC A112: Coastal Tussock Saltmarsh

Description:

Upper coastal saltmarsh zones dominated by robust tussocks. Scattered distribution along the Victorian coast.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Austrostipa stipoides</i>	Prickly Spear-grass
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Gahnia filum</i>	Chaffy Saw-sedge
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
<i>Samolus repens</i>	Creeping Brookweed
<i>Suaeda australis</i>	Austral Seablite

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Large tufted graminoids	1	25
Medium to small herbs	2	1

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Austrostipa stipoides</i> and/or <i>Gahnia filum</i>	50%

EVC 58: Disturbed

Description:

Cleared or otherwise modified sites, lacking native wetland vegetation

Indicator species (some or all of these species should be present)

None recognised

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

None recognised.

2. WEEDS

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

None recognised.

EVC 673: Dune Soak Woodland

Description:

Low diversity shrubby-sedgy woodland, lacking obligate aquatic flora, occurring on damp soils associated with dune swales, mostly at the interface between Quaternary aeolian and paludal deposits. Rare, apparently localised in far south-west Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Eucalyptus ovata</i>	Swamp Gum
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Leptospermum continentale</i>	Prickly Tea-tree

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Trees	1	10
Medium (to tall) shrubs	2	10
Small shrubs	3	5
Medium herbs	2	10
Medium (to tall) graminoids	3	20

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Asparagus officinalis</i>	Asparagus
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Olea europaea</i>	Olive
<i>Pyracantha crenatoserrata</i>	Broad-leaf Firethorn
<i>Rubus anglocandicans</i>	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Swamp Gum <i>Eucalyptus ovata</i>	20%

EVC 949: Dwarf Floating Aquatic Herbland

Description:

Surface layer of dwarf free-floating plants, usually as a component of more diverse aquatic systems, but sometimes comprising the only life-form present, and potentially expanding over broad areas during inundation. Widespread in lowland areas, but rarely as the sole component of a wetland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Azolla</i> spp.	Azolla
<i>Lemna</i> spp.	Duckweed
<i>Ricciocarpos natans</i>	Fringed Heartwort
<i>Spirodela punctata</i>	Thin Duckweed
<i>Wolffia</i> spp.	Duckweed

Conditions when the EVC should not be assessed

Dry conditions (where remains of life-form no longer evident), or very recently inundated conditions (prior to development of vegetation).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tiny floating aquatics	1	+	Either present or absent (any cover)

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche stagnalis</i>	Common Starwort
<i>Salvinia molesta</i>	Salvinia

Conditions where weeds are considered to have a negligible impact

Note conditions when the EVC should not be assessed

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore dieback associated with natural drying cycles.

Structural dominant	Benchmark cover
Tiny floating aquatics	Assess for scoring category of >50% benchmark cover

EVC 678: Ephemeral Drainage-line Grassy Wetland

Description:

Ephemeral wetlands in gilgai systems along poorly defined drainage lines within native grassland, with patchy local variation of the balance between wetland and dryland elements of flora. Localised and endangered, low rainfall volcanic plains to near west of Melbourne and possibly also Cressy and Skipton areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Calocephalus citreus</i>	Lemon Beauty-heads
<i>Calotis</i> spp.	Burr Daisy
<i>Chloris truncata</i>	Windmill Grass
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eleocharis pusilla</i>	Small Spike-sedge
<i>Eryngium ovinum</i>	Blue Devil
<i>Eryngium vesiculosum</i>	Prickfoot
<i>Haloragis heterophylla</i>	Varied Raspwort
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Marsilea drummondii</i>	Common Nardoo
<i>Minuria leptophylla</i>	Minnie Daisy
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Themeda triandra</i>	Kangaroo Grass
<i>Walwhalleya proluta</i>	Rigid Panic

Notes on indicator species

With relatively low cover of *Themeda triandra* and/or *Rytidosperma duttonianum*.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to medium) sedges	2	10
Medium (to tall) herbs	5	10
Medium (to tall) tussock grasses	3	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cotula coronopifolia</i>	Water Buttons
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Nassella neesiana</i>	Chilean Needle-grass
<i>Paspalum</i> spp.	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago lanceolata</i>	Ribwort
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

If vegetation has been recently burnt, assess for scoring category of >50% of benchmark cover.

Structural dominant	Benchmark cover
Medium (to tall) tussock grasses	20%

EVC 914: Estuarine Flats Grassland

Description:

Tussock grassland to sedgeland of low-lying coastal sites, beyond zone of normal tidal inundation but sometimes subject to seasonal waterlogging or rarely brief intermittent inundation (e.g. at the rear of salt marshes and around drainage-line swamps behind barrier dunes).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acaena novae-zelandiae</i>	Bidgee-widgee	
<i>Apium prostratum</i>	Sea Celery	
<i>Austrostipa stipoides</i>	Prickly spear-grass	marginal sites in Gippsland
<i>Clematis microphylla</i> s.s.	Small-leaved Clematis	
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Ficinia nodosa</i>	Knobby Club Rush	
<i>Poa poiformis</i>	Coast Tussock-grass	typical dominant
<i>Senecio pinnatifolius</i>	Variable Groundsel	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) herbs	3	+
Medium (to tall) tufted grasses	1	25
Medium non-tufted grasses	1	+
Medium sedges	1	+

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Chrysanthemoides monilifera</i>	Boneseed
<i>Cortaderia</i> spp.	Pampas Grass
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Festuca arundinacea</i>	Tall Fescue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Invasion by Swamp Paperbark <i>Melaleuca ericifolia</i>	Active invasion fronts of suckers <1.5m tall	<1%	Minor
		1-5%	Moderate
		>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) graminoids (mostly <i>Poa poiformis</i> , also <i>Ficinia nodosa</i> and sometimes <i>Austrostipa stipoides</i>)	50%

EVC 952: Estuarine Reedbed

Description:

Vegetation dominated by tall reeds (usually c. 1.5-3 m in height), in association with a sparse ground-layer of salt tolerant herbs. Distinguished from Estuarine Wetland (EVC 10) by the vigour and total dominance of the reeds, as well as the absence or low abundance of samphires in the ground layer. Sub-saline situations of coastal estuaries (sometimes periodically blocked by sand bars), localised in scattered near coastal sites between Nelson and East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Bolboschoenus caldwellii</i>	Salt Club-sedge	
<i>Crassula helmsii</i>	Swamp Crassula	
<i>Gahnia filum</i>	Chaffy Saw-sedge	
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush	
<i>Phragmites australis</i>	Common Reed	structural dominant
<i>Samolus repens</i>	Creeping Brookweed	
<i>Suaeda australis</i>	Austral Seablite	
<i>Triglochin striata</i>	Streaked Arrowgrass	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Ignore seasonal dieback of *Phragmites australis*.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Tall non-tufted grasses	1	20
Small (to medium) herbs	4	+

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cotula coronopifolia</i>	Water Buttons
<i>Festuca arundinacea</i>	Tall Fescue
<i>Paspalum distichum</i>	Water Couch
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Sonchus</i> spp.	Sow Thistle

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Invasion by Swamp Paperbark <i>Melaleuca ericifolia</i>	Active invasion	<1%	Minor
	fronts of suckers	1-5%	Moderate
	<1.5m tall	>5%	Severe
Invasion by succulent stemmed chenopods (<i>Salicornia</i> spp. or <i>Tecticornia</i> spp.)		2-5%	Minor
		5-10%	Moderate
		>10%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall non-tufted grasses, <i>Phragmites australis</i>	40%

EVC 953: Estuarine Scrub

Description:

Shrubland to scrub of myrtaceous shrub species of sub-saline habitats, occurring in association with ground-layer dominated by halophytic herbs, notably on the verges of Estuarine Wetland (EVC 10), where peripheral or further upstream, or at the rear of Coastal Saltmarsh Aggregate (EVC 9). Scattered in suitable habitat along the coast, but rare in western Victoria and of restricted total extent, reduced by clearing.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower	
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Ficinia nodosa</i>	Knobby Club-rush	
<i>Gahnia filum</i>	Chaffy Saw-sedge	
<i>Goodenia radicans</i>	Shiny Swamp-mat	
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush	
<i>Juncus revolutus</i>	Creeping Rush	
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	Western Victoria
<i>Melaleuca ericifolia</i>	Swamp Paperbark	Eastern Victoria
<i>Melaleuca gibbosa</i>	Slender Honey Myrtle	South-western Victoria
<i>Melaleuca halmaturorum</i>	Salt Paperbark	South-western Victoria
<i>Melaleuca lanceolata</i>	Moonah	Western Victoria
<i>Myoporum insulare</i>	Common Boobialla	
<i>Poa poiformis</i>	Coast Tussock-grass	
<i>Rhagodia candolleana</i>	Coastal Salt-bush	
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	
<i>Samolus repens</i>	Creeping Brookweed	
<i>Tetragonia implexicoma</i>	Bower Spinach	
<i>Triglochin striata</i>	Streaked Arrowgrass	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall shrubs	2	15
Small (to medium) non-tufted grasses	1	1
Small (to medium) herbs	3	10
Medium (to tall) graminoids	3	1

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Cirsium vulgare</i>	Spear Thistle
<i>Delairea odorata</i>	Cape Ivy
<i>Festuca arundinacea</i>	Tall Fescue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall shrubs (<i>Melaleuca</i> spp. or <i>Leptospermum lanigerum</i>)	30%

EVC 10: Estuarine Wetland

Description:

Rushland/sedgeland vegetation, usually dominated by *Juncus kraussii* subsp. *australiensis* and variously with a component of halophytic herbs, occurring in regularly-inundated wetlands of estuarine flats. Distinguished from Estuarine Reedbed (EVC 952) by the smaller stature and reduced dominance of *Phragmites australis* (and greater diversity), from Coastal Saltmarsh Aggregate (EVC 9) by the dominance of medium-sized graminoids (other than *Austrostipa stipoides* in the latter), and from Estuarine Scrub (EVC 953) by the general absence of woody species. Scattered along the coast in estuarine situations, also at rear of saltmarshes where there is seepage, but most extensive in association with larger estuarine floodplains.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Apium prostratum</i>	Sea Celery	
<i>Bolboschoenus caldwellii</i>	Salt Club-sedge	in less saline sites
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Goodenia radicans</i>	Shiny Swamp-mat	
<i>Isolepis cernua</i>	Nodding Club-sedge	
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush	typical dominant
<i>Leptinella</i> spp.	Creeping Cotula	
<i>Thyridia repens</i>	Creeping Monkey-flower	
<i>Phragmites australis</i>	Common Reed	
<i>Ranunculus amphitrichus</i>	Small River Buttercup	
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	
<i>Samolus repens</i>	Creeping Brookweed	
<i>Schoenoplectus pungens</i>	Sharp Club-sedge	
<i>Suaeda australis</i>	Austral Seablite	
<i>Triglochin striata</i>	Streaked Arrowgrass	
Woody species confined to scattered and stunted specimens on margins		
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	
<i>Melaleuca ericifolia</i>	Swamp Paperbark	
<i>Myoporum insulare</i>	Common Boobialla	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) non-tufted graminoids	2	30
Small (to medium) herbs	5	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Atriplex prostrata</i>	Hastate Orache
<i>Cortaderia</i> spp.	Pampas Grass
<i>Cotula coronopifolia</i>	Water Buttons
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Sporobolus anglica</i>	Common Cord-grass
<i>Sporobolus x townsendii</i>	Townsend's Cord-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Invasion by dryland species (e.g. <i>Acacia verticillata</i> , <i>Poa poiformis</i> , <i>Rhagodia candolleana</i>)	Incidental plants	negligible	Minor
	Scattered plants	<1%	Moderate
	Frequent plants	>1%	Severe
Invasion by Swamp Paperbark <i>Melaleuca ericifolia</i>	Active invasion	<1%	Minor
	fronts of suckers	1-5%	Moderate
	<1.5m tall	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Where respective zones are present, score each lifeform independently within its zone of dominance to co-dominance and average the values obtained.

Structural dominant	Benchmark cover
Medium (to tall) non-tufted graminoids (mainly <i>Juncus kraussii</i> , with relatively minor <i>Phragmites australis</i> and/or <i>Bolboschoenus caldwellii</i>)	60%

EVC 721: Fern Swamp

Description:

Ferny (to sedgy-ferny) vegetation of swampy drainage lines in high-rainfall areas (mostly occurring along drainage systems which support Riparian Thicket (EVC 59) or Cool Temperate Rainforest (EVC 31) in more free-draining areas). Woody species are generally confined to sparse emergent tall shrubs/small trees, but sparse emergent *Eucalyptus ovata* are sometimes present. Rare, higher rainfall areas (Central Highlands, South Gippsland, Otways).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia melanoxylon</i>	Blackwood	sparse
<i>Astelia australiana</i>	Tall Astelia	can be an extremely localised component species (near Powelltown)
<i>Atherosperma moschatum</i>	Southern Sassafras	sparse
<i>Austrocynoglossum latifolium</i>	Forest Hound's-tongue	on drier edges
<i>Blechnum minus</i>	Soft Water-fern	
<i>Blechnum nudum</i>	Fishbone Water-fern	
<i>Blechnum wattsii</i>	Hard Water-fern	
<i>Carex appressa</i>	Tall Sedge	
<i>Coprosma quadrifida</i>	Prickly Currant-bush	
<i>Cyathea australis</i>	Rough Tree-fern	on drier edges
<i>Dicksonia antarctica</i>	Soft Tree-fern	
<i>Gleichenia microphylla</i>	Scrambling Coral-fern	
<i>Histiopteris incisa</i>	Bat's Wing Fern	on drier edges
<i>Hydrocotyle hirta</i>	Hairy Pennywort	on drier edges
<i>Isolepis inundata</i>	Swamp Club-sedge	
<i>Lepidosperma elatius</i>	Tall Sword-sedge	on drier edges
<i>Leptospermum grandifolium</i>	Mountain Tea-tree	sparse
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	sparse
<i>Melaleuca squarrosa</i>	Scented Paperbark	sparse
<i>Parsonsia brownii</i>	Twining Silkpod	
<i>Persicaria hydropiper</i>	Water Pepper	
<i>Stellaria flaccida</i>	Forest Starwort	on drier edges
<i>Tetrarrhena juncea</i>	Forest Wire-grass	on drier edges
<i>Todea barbara</i>	Austral King-fern	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Ferns	3	15
Tall (to medium) graminoids	2	1
Small sedges	1	1
Tall shrubs (to small trees)	3	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus anglocandicans</i>	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore seasonal snow-damage to fern crowns, where this occurs.

Structural dominant	Benchmark cover
Ferns	30%

EVC 809: Floodplain Grassy Wetland

Description:

Wetland dominated by floating aquatic grasses (which persist to some extent as turf during drier periods), occurring in the most flood-prone riverine areas. Typically treeless, but sometimes with thickets of saplings or scattered more mature specimens of River Red Gum *Eucalyptus camaldulensis*. Restricted, Murray River floodplain, primarily within Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	
<i>Azolla filiculoides</i>	Pacific Azolla	
<i>Centipeda</i> spp.	Sneezeweed	
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Juncus ingens</i>	Giant Rush	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	Clove-strip	
<i>Myriophyllum crispatum</i>	Upright Water-milfoil	
<i>Nymphoides crenata</i>	Wavy Marshwort	
<i>Persicaria prostrata</i>	Creeping Knotweed	
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	
<i>Sporobolus mitchellii</i>	Rat-tail Couch	in drier north-western Victoria in association with <i>P. spinescens</i>
<i>Stellaria angustifolia</i> subsp. <i>tenella</i>	Matted Starwort	

Conditions when the EVC should not be assessed

Recently flooded conditions, before aquatic grasses have reached the water surface.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, other than to exclude assessment of small herbs within inundated portions of the wetland.

General comments on assessing critical lifeform groups

Medium to small herbs are post-flooding opportunists.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium aquatic to semi-aquatic herbs	2	+	substantially modified if restricted to very few individuals
Medium (to small) herbs	2	+	post-flooding opportunists, substantially modified if restricted to very few individuals
Perennial semi-aquatic to aquatic grasses	1	30	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Paspalum distichum</i>	Water Couch
<i>Sagittaria</i> spp.	Sagittaria

Conditions where weeds are considered to have a negligible impact

Colonization by inundation-intolerant annuals during prolonged dry periods - not relevant to wet phase of vegetation.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% Cover	Scale of severity
Invasion by River Red-gum <i>Eucalyptus camaldulensis</i> and/or Giant Rush <i>Juncus ingens</i>	Incidental	<1%	Minor
	Denser regeneration	1-5%	Moderate
		>5%	Severe
Invasion by Water-milfoil		10-25%	Minor
		25-50%	Moderate
		>50%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Allowance required for visibility of respective life-form grouping at the time of sampling.

Structural dominant	Benchmark cover
Perennial semi-aquatic to aquatic grasses	60%

EVC 56: Floodplain Riparian Woodland

Description:

Eucalypt dominated woodland of well developed floodplains of less arid areas, often including treeless wetland areas (referable to Floodplain Wetland Aggregate [EVC 172]). At maximum development, Floodplain Riparian Woodland represents the vegetation of a mosaic of terraces, active floodways and former channels and consequently a number of communities indicative of a range of hydrological conditions. Parts of the floodplain which typically lack obligate wetland species (e.g. levees which are only intermittently and briefly subject to flooding if at all) may support vegetation referable to the non-wetland EVC Riparian Woodland. This internal variation within the EVC has led to the additional mapping labels Floodplain Riparian Woodland/Billabong Wetland Mosaic and Floodplain Riparian Woodland/Floodplain Wetland Mosaic. It is rare that the more distinctive wetland components within Floodplain Riparian Woodland are at a sufficient scale to allow comprehensive separation during vegetation mapping exercises. In functional terms all three potential labels are usually equivalent, though in instances it may be possible to distinguish the larger areas of better developed wetland within the relevant area of floodplain. Floodplains of less arid southern and eastern parts of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia dealbata</i>	Silver Wattle	
<i>Acacia mearnsii</i>	Black Wattle	
<i>Acacia melanoxylon</i>	Blackwood	
<i>Carex</i> spp.	Sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Eucalyptus viminalis</i> subsp. <i>viminalis</i>	Manna Gum	sometimes with Swamp Gum <i>Eucalyptus ovata</i> subsp. <i>ovata</i> and/or Narrow-leaf Peppermint <i>Eucalyptus radiata</i> subsp. <i>radiata</i>
<i>Poa labillardierei</i>	Common Tussock-grass	

Conditions when the EVC should not be assessed

None recognised (other than during flood conditions).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	substantially modified if living trees of at least medium size (>50 cm DBH) are infrequent to absent or dense regeneration thickets are present
Small trees/tall shrubs	2	5	
Medium shrubs	3	5	
Medium herbs	4	2	
Medium graminoids	5	40	

2. WEEDS

High threat weed species

Scientific name	Common name	Scientific name	Common name
<i>Acetosella vulgaris</i>	Sheep Sorrel	<i>Paspalum dilatatum</i>	Paspalum
<i>Agrostis capillaris</i>	Brown-top Bent	<i>Paspalum distichum</i>	Water Couch
<i>Agrostis stolonifera</i>	Creeping Bent	<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Atriplex prostrata</i>	Hastate Orache	<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Brassica fruticulosa</i>	Twiggy Turnip	<i>Pinus radiata</i>	Radiata Pine
<i>Callitriche stagnalis</i>	Common Starwort	<i>Plantago lanceolata</i>	Ribwort
<i>Cirsium vulgare</i>	Spear Thistle	<i>Poa pratensis</i>	Kentucky Blue-grass
<i>Crataegus monogyna</i>	Hawthorn	<i>Ranunculus repens</i>	Creeping Buttercup
<i>Cyperus eragrostis</i>	Drain Flat-sedge	<i>Rorippa palustris</i>	Marsh Yellow-cress
<i>Dactylis glomerata</i>	Cocksfoot	<i>Rosa rubiginosa</i>	Sweet Briar
<i>Echium plantagineum</i>	Paterson's Curse	<i>Rubus anglocandicans</i>	Blackberry
<i>Ehrharta erecta</i> var. <i>erecta</i>	Panic Veldt-grass	<i>Rumex conglomeratus</i>	Clustered Dock
<i>Foeniculum vulgare</i>	Fennel	<i>Rumex crispus</i>	Curled Dock
<i>Galium aparine</i>	Cleavers	<i>Silybum marianum</i>	Variegated Thistle
<i>Helminthotheca echioides</i>	Ox-tongue	<i>Solanum pseudocapsicum</i>	Madeira Winter-cherry
<i>Holcus lanatus</i>	Yorkshire Fog	<i>Tradescantia fluminensis</i>	Wandering Jew
<i>Iris pseudacorus</i>	Yellow Flag Iris	<i>Ulex europaeus</i>	Gorse
<i>Leersia oryzoides</i>	Rice Cut-grass	<i>Verbena bonariensis</i> s.l.	Purple-top Verbena
<i>Lolium perenne</i>	Perennial Rye-grass	<i>Vinca major</i>	Blue Periwinkle

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators of altered process

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominants	Benchmark cover
<i>Eucalyptus</i> spp., principally <i>E. camaldulensis</i> or <i>E. viminalis</i> subsp. <i>viminalis</i>	20%

EVC 280: Floodplain Thicket

Description:

Densely shrubby woodland to open woodland vegetation of braided channel systems of poorly-drained broad alluvial flats associated with floodplain habitats. Characterised by the diversity of *Melaleuca* and *Leptospermum* spp. present. Floodplain Thicket has floristic affinities with forms of Riparian Scrub (EVC 191) and Swamp Scrub (EVC 53). As well as indicator species (listed), aquatics are present in channels. Localised to the vicinity of the Grampians.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia provincialis</i>	Wirilda	
<i>Acacia verticillata</i>	Prickly Moses	
<i>Callistemon rugulosus</i>	Scarlet Bottlebrush	
<i>Empodisma minus</i>	Spreading Rope-rush	
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	
<i>Hakea nodosa</i>	Yellow Hakea	
<i>Leptospermum</i> spp.	Tea Tree	<i>L. continentale</i> , <i>L. scoparium</i> , <i>L. obovatum</i> , <i>L. lanigerum</i>
<i>Machaerina tetragona</i>	Square Twig-sedge	
<i>Melaleuca</i> spp.	Honey-myrtle	<i>M. squarrosa</i> , <i>M. squamea</i> , <i>M. gibbosa</i> , <i>M. decussata</i>
<i>Eucalyptus</i> spp.	Eucalypt	<i>E. camaldulensis</i> , <i>E. leucoxylon</i> , <i>E. ovata</i> subsp. <i>ovata</i> , <i>E. viminalis</i>

Conditions when the EVC should not be assessed

None recognised, other than inundation events.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium shrubs	4	25
Trees	1	5
Small to medium graminoids	2	10
Tall tufted sedges	2	5

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised, other than potential die-back events through disease, predation altered hydrology.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform and average

Structural dominants	Benchmark cover for structural dominant
Medium shrubs, <i>Melaleuca</i> and/or <i>Leptospermum</i> species	50%
Trees, <i>Eucalyptus</i> spp.	10%

EVC 172: Floodplain Wetland Aggregate

Description:

Collective label for the various zones of vegetation associated with wetlands of riparian floodplains, best developed in association with Floodplain Riparian Woodland. Potentially includes mosaics of scrub/shrubland, reedbed, sedgeland, rushland, grassland and/or herbland zones. The following components are variously recognisable within Floodplain Wetland: Aquatic Herbland (EVC 653), Aquatic Sedgeland (EVC 308), Tall Marsh (EVC 821), Swamp Scrub (EVC 53), Wet Verge Sedgeland (EVC 932), Floodway Pond Herbland (EVC 810) and Dwarf Floating Aquatic Herbland (EVC 949). Billabong Wetland (EVC 334) is also an aggregate EVC including many of these components. Floodplains of major streams, principally in less arid areas.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs above.

Conditions when the EVC should not be assessed

None recognised but may be impossible to access and sample during floods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Small aquatic/mud-colonizing herbs may not be visible or expressed during extreme wet or prolonged dry conditions.

General comments on assessing critical lifeform groups

Score zones with trees and/or shrubs under respective EVCs.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Herbs	2	+	broad-leaved, not aquatic but moisture-requiring, tolerant of shallow inundation periods; substantially modified if restricted to very few individuals
Aquatic herbs	2	+	or small to prostrate mud-colonizing species, can include small soft-tissued annual sedges; substantially modified if restricted to very few individuals
Tall graminoids	3	+	substantially modified if restricted to very few individuals
Medium graminoids	3	+	substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus</i> spp.	Fox Tail
<i>Atriplex prostrata</i>	Hastate Orache
<i>Callitriche stagnalis</i>	Common Starwort
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Nymphaea</i> spp.	Waterlily
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Salix</i> spp.	Willow
<i>Typha latifolia</i>	Lesser reed-mace

Conditions where weeds are considered to have a negligible impact

While plants are inundated or otherwise inactive.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		% cover	Scale of severity
Invasion by woody species	Scattered individuals	<1%	Minor
	Dense regeneration of invasion fronts apparent	1-5%	Moderate
	Denser regeneration	>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised, provided relevant vegetation zones are visible rather than obscured by turbid water.

4. VEGETATION STRUCTURE AND HEALTH

Where present, score each lifeform separately and average. See component EVCs and note also EVC 334 Billabong Wetland Aggregate.

Structural dominant	Benchmark cover
Sedges	Assess for scoring category of >50% benchmark cover
Reeds	
Rushes	
Herbs	

EVC 810: Floodway Pond Herbland

Description:

Low herbland on the drying mud of floors of ponds on floodway systems (mainly riverine floodplains). The floristics (and diversity) can be quite variable (both spatially and temporally), according to the traits of the relevant individual pond. The floristics also vary in temporal cycles with the unvegetated unit (EVC 990) and probably between seasons at some locations. Widely dispersed along major riparian floodplains, especially of the Murray River and tributaries.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Alternanthera</i> spp.	Joyweed	
<i>Carex gaudichaudiana</i>	Fen Sedge	sometimes in narrow fringes
<i>Centipeda</i> spp.	Sneezeweed	
<i>Dysphania glomulifera</i> subsp. <i>glomulifera</i>	Globular Pigweed	
<i>Eleocharis acuta</i>	Common Spike-sedge	sometimes in narrow fringes
<i>Fimbristylis</i> spp.	Fringe Sedge	
<i>Glinus</i> spp.	Carpet Weed	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Persicaria</i> spp.	Knotweed	
<i>Polygonum plebeium</i>	Small Knotweed	
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	sometimes in narrow fringes
<i>Stellaria angustifolia</i> subsp. <i>tenella</i>	Matted Starwort	
<i>Semi-arid versions can include an increased component of species shared with the lacustrine habitat, notably:</i>		
<i>Glossostigma elatinoides</i>	Small Mud-mat	
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice	
<i>Heliotropium</i> spp.	Heliotrope	

Conditions when the EVC should not be assessed

Deep flooding, where emergent habitat is lacking or sustained drought where component species are not evident.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

During immersion phases, assess only from post-emergent areas.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs	2	+	seasonal species on wetland floor; substantially modified if restricted to very few individuals
Small to prostrate herbs and/or annual sedges	2	+	seasonal species on wetland floor; substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche stagnalis</i>	Common Starwort
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Xanthium</i> spp.	Cocklebur

Conditions where weeds are considered to have a negligible impact

Annuals during sustained dry conditions.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Regeneration cover (%)	Scale of severity
Invasion by woody species (typically River Red-gum <i>Eucalyptus camaldulensis</i>).	Scattered regeneration <1%	Minor
	Regeneration 1-5%	Moderate
	Dense regeneration >5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore dieback due to natural drying cycles.

Structural dominant	Benchmark cover
Small (to medium) herbs	Assess for scoring category of >50% benchmark cover. Cover varies dramatically according to wetting and drying cycles.

EVC 945: Floodway Pond Herbland/Riverine Swamp Forest Complex

Description:

River Red-gum with a ground-layer dominated by herbaceous species largely shared with Floodway Pond Herbland (EVC 810) and/or Aquatic Herbland (EVC 653), or with the ground-layer virtually absent (due to thick accumulations of forest litter or persistence of black water, or sometimes excluded by dense thickets of young River Red-gum *Eucalyptus camaldulensis* regeneration). The abundance of annual species can be highly variable between seasons (and equivalent seasons in different years). Dispersed on floodplains of the Murray River and major tributaries, also some lake verges in the Wimmera.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
Murray Mallee & Mid Murray		
<i>Eleocharis acuta</i>	Common Spike-sedge	.
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Persicaria</i> spp.	Knotweed	Murray Mallee (especially <i>P. prostrata</i>) & Mid Murray (<i>P. prostrata</i> , <i>P. decipiens</i> , <i>P. hydropiper</i>)
Mid Murray		
<i>Alternanthera denticulata</i> s.s.	Lesser Joyweed	
<i>Centipeda</i> spp.	Sneezeweed	especially <i>C. cunninghamii</i>
<i>Cyperus gunnii</i> subsp. <i>gunnii</i>	Flecked Flat-sedge	occasional
<i>Juncus ingens</i>	Giant Rush	occasional
<i>Myriophyllum crispatum</i>	Upright Water-milfoil	
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	sparse
<i>Juncus ingens</i>	Giant Rush	occasional
<i>Typha</i> spp.	Cumbungi	occasional
Murray Mallee		
<i>Alternanthera</i> spp.	Joyweed	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Centipeda minima</i> s.l.	Spreading Sneezeweed	
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	
<i>Eclipta platyglossa</i>	Yellow Twin-heads	
<i>Gnaphalium polycaulon</i>	Indian Cudweed	

Conditions when the EVC should not be assessed

None recognised, provided attached vegetation within wetland shallows can be observed. Discretion required during prolonged dry periods and following recent flooding.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	exclude young regeneration
Medium (to tall) aquatic herbs	2	+	
Small (to medium) herbs	3	+	often prostrate, not true aquatics
Medium monocots, at least semi-aquatic	2	+	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alisma lanceolatum</i>	Water Plantain
<i>Cuscuta campestris</i>	Field Dodder
<i>Paspalum distichum</i>	Water Couch
<i>Sagittaria</i> spp.	Sagittaria
<i>Xanthium spinosum</i>	Bathurst Burr

Conditions where weeds are considered to have a negligible impact

Opportunistic, flood-intolerant species present during dry periods.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
River Red-gum <i>Eucalyptus camaldulensis</i> regeneration and/or	patchy/dense regeneration	5-10% Minor
Giant Rush <i>Juncus ingens</i> invasion	denser regeneration	10-20% Moderate
		>20% Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	10%

EVC 723: Forest Bog

Description:

Wetland comprising an open, frequently pedestalled shrubland with open clumps of large graminoids (notably restiads), and with the lower strata dominated by semi-aquatic herbs or *Sphagnum* moss. Very rare, localised variants occurring within forest communities of South Gippsland and the south-west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
South Gippsland & SW Victoria	
<i>Baloskion tetraphyllum</i>	Tassel Cord-rush
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Melaleuca squarrosa</i>	Scented Paperbark
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
South Gippsland	
<i>Amphibromus recurvatus</i>	Dark Swamp Wallaby- grass
<i>Carex appressa</i>	Tall Sedge
<i>Cycnogeton</i> spp.	Water Ribbons
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Goodenia humilis</i>	Swamp Goodenia
<i>Sphagnum</i> spp.	Peat Moss
SW Victoria	
<i>Juncus procerus</i>	Tall Rush
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Liparophyllum exaltatum</i>	Erect Marsh-flower
<i>Machaerina tetragona</i>	Square Twig-sedge

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Aquatic herbs and/or <i>Sphagnum</i> spp.	3	25	
Medium (to tall) shrubs	1	2	
Small(to medium) aquatic to semi-aquatic graminoids	2	2	
Tall graminoids	2	5	typically tough-leaved

2. WEEDS

High threat weeds

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess species and lifeforms separately using cover specified for each. Average scores.

Structural dominant	Benchmark cover
Aquatic herbs and/or <i>Sphagnum</i> spp.	50%
Tall graminoids	5%
Small (to medium) aquatic to semi-aquatic graminoids	5%
Scented Paperbark <i>Melaleuca squarrosa</i>	5%

EVC 728: Forest Creekline Sedge Swamp

Description

Sedge dominated wetlands of drainage-line terraces within moist to wet forest areas. Very restricted occurrences in southern Victoria, mainly in highlands.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia melanoxylon</i>	Blackwood	sparse beyond edges
<i>Blechnum minus</i>	Soft Water-fern	
<i>Carex appressa</i>	Tall Sedge	
<i>Carex fascicularis</i>	Tassel Sedge	
<i>Cyperus lucidus</i>	Leafy Flat-sedge	
<i>Epilobium pallidiflorum</i>	Showy Willow-herb	
<i>Gleichenia microphylla</i>	Scrambling Coral-fern	
<i>Gratiola</i> spp.	Brooklime	
<i>Hypolepis rugosula</i>	Ruddy Ground-fern	
<i>Juncus gregiflorus</i>	Green Rush	
<i>Kunzea ericoides</i> s.l.	Burgan	sparse beyond edges
<i>Lepidosperma elatius</i>	Tall Sword-sedge	can be dominant on the drier verges
<i>Lythrum salicaria</i>	Purple Loosestrife	
<i>Persicaria decipiens</i>	Slender Knotweed	
<i>Phragmites australis</i>	Common Reed	
<i>Rubus parvifolius</i>	Small-leaf Bramble	
<i>Stellaria flaccida</i>	Forest Starwort	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Ferns	2	2
Tall graminoids	3	20
Tall herbs	2	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Erythranthe moschata</i>	Musk Monkey-flower
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Rubus</i> spp.	Bramble
<i>Salix cinerea</i>	Grey Sallow
<i>Tradescantia fluminensis</i>	Wandering Jew

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall graminoids, Common Reed <i>Phragmites australis</i> , Leafy Flat-sedge <i>Cyperus lucidus</i> or Sedge <i>Carex</i> spp.	40%

EVC A129: Forest Wet Flat Herbland

Description

Defining characteristics: Low herbland to grassland on flats subject to waterlogging and sporadic shallow inundation, at the heads of minor drainage lines within Herb-rich Foothill Forest at low to moderate elevations (c. 100-700 m elevation). Known from very localized occurrences on the Strathbogie Tableland, the Trentham and Kyneton districts, and the Cobboboonee Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass	
<i>Centella cordifolia</i>	Centella	Major species
<i>Centipeda elatinoides</i>	Elatine Sneezeweed	Major species
<i>Deyeuxia quadriseta</i>	Reed Bent-grass	
<i>Rytidosperma semiannulare</i>	Wetland Wallaby-grass	
<i>Carex appressa</i>	Tall Sedge	Patchy or scattered
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eryngium vesiculosum</i>	Prickfoot	
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	Patchy or scattered if present
<i>Gratiola peruviana</i>	Austral Brooklime	
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Mat Grass	
<i>Hydrocotyle sibthorpioides</i>	Shining Peppermint	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Isolepis fluitans</i>	Floating Club-sedge	Major species
<i>Juncus amabilis</i>	Hollow Rush	Patchy or scattered if present
<i>Juncus gregiflorus</i>	Green Rush	Patchy or scattered if present
<i>Juncus holoschoenus</i>	Joint-leaf Rush	
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass	Major species
<i>Lepidosperma elatius</i>	Tall Sword-sedge	Patchy or scattered if present
<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	Spiny-head Mat-rush	Drier edges
<i>Montia australasica</i>	White Purslane	
<i>Poa labillardierei</i>	Common Tussock-grass	Drier edges
Tree species fringing or scattered within parts of wetland		
<i>Acacia melanoxylon</i>	Blackwood	
<i>Eucalyptus brookeriana</i>	Brooker's Gum	Trentham
<i>Eucalyptus camphora</i> subsp. <i>humeana</i>	Mountain Swamp-gum	Strathbogies
<i>Eucalyptus ovata</i>	Swamp Gum	
<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint	
<i>Eucalyptus viminalis</i> subsp. <i>viminalis</i>	Manna Gum	

Notes on indicator species

A range of grasses can be conspicuous under some seasonal conditions but less obvious within herbland in others. Several species of taller monocots can occur as a scattered or patchy component. The vegetation is largely treeless but can include scattered individuals, especially towards the margins

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Prostrate or small (to medium) dicot herbs	5	15
Small (to medium) stoloniferous or rhizomatous sedges and grasses	3	15
Medium tufted grasses	3	5
Tall (to medium) sedges and rushes	3	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Rubus</i> spp.	Bramble

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small to medium herbs and non-tufted graminoids	60%

EVC 718: Freshwater Lake Aggregate

Description:

Collective label for the various zones of vegetation associated with the floors and verges of freshwater lakes. Central deeper areas can support Aquatic Herbland (EVC 653), Submerged Aquatic Herbland (EVC 918) or open water (and bare earth or Lake Bed Herbland [EVC 107] when dry). A range of communities can occur on the fringes. Variants of Tall Marsh (EVC 821) are often present in more sheltered verges. Scattered, mainly in western areas of the State.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs.

Conditions when the EVC should not be assessed

See descriptions of component EVCs.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

See component EVCs.

General comments on assessing critical lifeform groups

See component EVCs. As each EVC represents a biodiversity unit, if an overall score is required, use average from set of EVC scores (regardless of relative extent of EVCs).

2. WEEDS

See component EVCs.

3. INDICATORS OF ALTERED PROCESSES

See component EVCs.

4. VEGETATION STRUCTURE AND HEALTH

See component EVCs.

EVC 954: Freshwater Lignum – Cane Grass Swamp

Description:

Open grassy shrubland of wetlands dominated by *Eragrostis infecunda* with *Duma florulenta*, usually very species-poor in central deeper areas, but potentially diverse and herb-rich on the outer fringes. Scattered on drier plains of the north and west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Duma florulenta</i>	Tangled Lignum
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed
<i>Rumex</i> spp.	Dock

Additional species from the richer outer verges

<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Asperula conferta</i>	Common Woodruff
<i>Carex tereticaulis</i>	Poong'ort
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Eclipta platyglossa</i>	Yellow Twin-heads
<i>Eryngium vesiculosum</i>	Prickfoot
<i>Goodenia heteromera</i>	Spreading Goodenia
<i>Haloragis aspera</i>	Rough Raspwort
<i>Juncus flavidus</i>	Gold Rush
<i>Lobelia concolor</i>	Poison Pratia
<i>Marsilea drummondii</i>	Common Nardoo
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Senecio</i> spp.	Groundsel
<i>Teucrium racemosum</i> s.l.	Grey Germander

Conditions when the EVC should not be assessed

None recognised, but vegetation condition may be underscored following recent inundation events or following prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	1	+	substantially modified if clearly senescing or with dense regeneration
Small (to medium) herbs	4	5	
Cane grass	1	10	other than cane grass
Medium grasses and sedges	3	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cotula coronopifolia</i>	Water Buttons
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess species separately and average scores.

Structural dominant	Benchmark cover
Tangled Lignum <i>Duma florulenta</i>	5%
Southern Cane-grass <i>Eragrostis infecunda</i>	20%

EVC 657: Freshwater Lignum Shrubland

Description:

Open shrubland on fringes of wetlands (typically shallow lakes) on basalt, potentially in intermittently damp sites but above normal inundation levels and lacking obligate wetland flora. Highly restricted, scattered remnants in lower-rainfall areas of the western volcanic plain.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Duma florulenta</i>	Tangled Lignum
<i>Epilobium billardierianum</i>	Variable Willow-herb
<i>Haloragis aspera</i>	Rough Raspwort
<i>Juncus flavidus</i>	Gold Rush
<i>Oxalis exilis</i>	Shady Wood-sorrel
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Rumex brownii</i>	Slender Dock
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium shrubs	1	5
Medium (to tall) grasses	5	30
Medium (to tall) rushes	1	+
Small (to medium) herbs	8	10

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Nassella neesiana</i>	Chilean Needle-grass
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Poa pratensis</i>	Kentucky Blue-grass
<i>Rubus anglocandicans</i>	Blackberry
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Duma florulenta</i>	10%

EVC 968: Gahnia Sedgeland

Description:

Species-poor, tall usually dense sedgeland vegetation of near-coastal soaks. Rare, south-west Victoria and Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Gahnia clarkei</i>	Tall Saw-sedge	
<i>Gahnia trifida</i>	Coast Saw-sedge	
<i>Machaerina juncea</i>	Bare Twig-sedge	
<i>Schoenus carsei</i>	Wiry Bog-sedge	
<i>Triglochin striata</i>	Streaked Arrowgrass	robust forms

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed.

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) semi-aquatic herbs	1	+	substantially modified if restricted to very few plants and not at least scattered through vegetation
Tall sedges	1	15	
Small (to medium) sedges	2	5	

+ denotes presence

2. WEEDS

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

If vegetation includes a mosaic with patches dominated by smaller sedges, assess zones dominated by each lifeform separately and average score.

Structural dominant	Benchmark cover
Smaller sedges (may be present as a mosaic with tall sedges)	50% (if present)
Tall sedges e.g. <i>Gahnia</i> spp.	30%

EVC 1112: Granite Rock-pool Wetland

Description:

Herbland of seasonal ponds on granite exposures, generally dominated by annual species. Extremely restricted extent, in scattered locations on outcropping granite in northern Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Aphelia gracilis</i>	Slender Aphelia
<i>Callitriche umbonata</i>	Winged Water-starwort
<i>Crassula closiana</i>	Stalked Crassula
<i>Crassula decumbens</i>	Spreading Crassula
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Glossostigma cleistanthum</i>	Small-flower Mud-mat
<i>Isoetes muelleri</i>	Rock Quillwort
<i>Isolepis</i> spp.	Club Sedge
<i>Limosella australis</i>	Austral Mudwort
<i>Lythrum hyssopifolia</i>	Small Loosestrife
<i>Montia fontana</i>	Water-blinks
<i>Myriocephalus rhizocephalus</i>	Woolly-heads
<i>Myriophyllum porcatum</i>	Ridged Water-milfoil
<i>Myriophyllum striatum</i>	Striped Water-milfoil

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

The expression of diversity will be inhibited when ponds are completely full. Will be underscored during sustained drought conditions.

General comments on assessing critical lifeform groups

Small herbs may be difficult to detect outside of the spring period.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tiny (to small) herbs	6	+	substantially modified if restricted to very few individuals
Tiny (to small) ferns	1	+	substantially modified if restricted to very few individuals

+ denotes presence

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tiny (to small) herbs (various annuals and ephemerals or ferns (<i>Isoetes</i> spp.)	Assess for scoring category of >50% benchmark cover, ignoring senescence which has occurred after seed production

EVC A127: Grassy Red Gum Swamp

Description:

An open to very open woodland dominated by River Red-gum, over a relatively species-poor ground-layer dominated by Common Swamp Wallaby-grass, potentially including treeless areas. The abundance of swamp wallaby-grass can be relatively consistent or vary with flooding cycles, with the ground-layer potentially becoming herbaceous to sedgy in character at times. Apparently very rare, disjunct sites in the Victorian Riverina.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Alternanthera denticulata</i> s.s.	Lesser Joyweed	
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass	usual ground-layer dominant
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Damasonium minus</i>	Star Fruit	
<i>Dysphania pumilio</i>	Clammy Goosefoot	
<i>Elatine gratioloides</i>	Waterwort	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eragrostis infecunda</i>	Southern Cane-grass	minor component if present
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Laphangium luteoalbum</i>	Jersey Cudweed	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	Clove-strip	
<i>Marsilea drummondii</i>	Common Nardoo	
<i>Myriophyllum verrucosum</i>	Red Water-milfoil	
<i>Persicaria lapathifolia</i>	Pale Knotweed	
<i>Persicaria prostrata</i>	Creeping Knotweed	
<i>Poa fordeana</i>	Forde Poa	minor component if present
<i>Potamogeton cheesemanii</i>	Red Pondweed	

Conditions when the EVC should not be assessed

Discretion required during prolonged dry periods and following recent flooding.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Aquatic species may not be detected during prolonged dry periods.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Medium monocots, at least semi-aquatic or tolerant of shallow inundation	3	40	
Aquatic herbs, ferns and sedges	3	1	
Small (to medium) herbs	4	1	amphibious or colonisers of mud

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

Opportunistic, flood-intolerant species present during dry periods.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
	2-5%	Minor
Mass regeneration of River Red-gum <i>Eucalyptus camaldulensis</i>	5-10%	Moderate
	>10%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red Gum <i>Eucalyptus camaldulensis</i>	30%

EVC 106: Grassy Riverine Forest

Description:

Open eucalypt dominated forest (to woodland) with a grassy understorey, dominated by species generally indicative of reasonably regular flooding (notably *Paspalidium jubiflorum*), but also tolerant of sustained dry periods. Murray River system downstream from Hume Weir.

Indicator species (some or all of these species should be present)

Scientific name	Common name
Canopy species	
<i>Eucalyptus camaldulensis</i>	River Red-gum
Dominant in the ground layer	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass
Associated ground layer species	
<i>Brachyscome paludicola</i>	Woodland Swamp-daisy
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch
<i>Euphorbia dallachyana</i>	Flat Spurge
<i>Rumex brownii</i>	Slender Dock
<i>Senecio quadridentatus</i>	Cotton Fireweed
<i>Wahlenbergia fluminalis</i>	River Bluebell

Notes on indicator species

Eleocharis acuta relatively minor if present.

Conditions when the EVC should not be assessed

None recognised but may be difficult to access and sample during floods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	15	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Small trees/tall shrubs	1	+	substantially modified if restricted to very few individual plants or forming dense thickets
Medium (to tall) herbs	5	5	
Medium (to tall) tussock grasses	1	15	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Chondrilla juncea</i>	Skeleton Weed
<i>Cirsium vulgare</i>	Spear Thistle
<i>Erigeron</i> spp.	Fleabane
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Panicum coloratum</i>	Coolah Grass
<i>Paspalum dilatatum</i>	Paspalum
<i>Phyla canescens</i>	Fog-fruit
<i>Solanum nigrum</i> s.s.	Black nightshade
<i>Verbena supina</i>	Trailing Verbena
<i>Xanthium</i> spp.	Cocklebur

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
	2-5%	Minor
Mass regeneration of River Red-gum <i>Eucalyptus camaldulensis</i>	5-10%	Moderate
	>10%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red Gum <i>Eucalyptus camaldulensis</i>	30%

EVC 811: Grassy Riverine Forest/Floodway Pond Herbland Complex

Description:

Eucalypt dominated forest or woodland of flood-prone areas, where herbaceous species characteristic of drying mud within wetlands (Floodway Pond Herbland [EVC 810] or in part Lake Bed Herbland [EVC 107]) are conspicuous in association or fine-scale mosaic with *Paspalidium jubiflorum* and other species characteristic of Grassy Riverine Forest (EVC 106). Restricted extent, Murray River system mainly in far north-west, but upstream at least as far as Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Centipeda cunninghamii</i>	Common Sneezeweed	in association or mosaic with <i>Paspalidium jubiflorum</i>
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice	in association or mosaic with <i>Paspalidium jubiflorum</i>
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	conspicuous in association or mosaic with <i>Persicaria</i> spp., <i>Centipeda cunninghamii</i> and/or <i>Glycyrrhiza acanthocarpa</i>
Other locally conspicuous species		
<i>Alternanthera denticulata</i> s.l.	Lesser Joyweed	
<i>Cardamine moirensis</i>	Riverina Bitter-cress	
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	
<i>Eclipta platyglossa</i>	Yellow Twin-heads	
<i>Euchiton sphaericus</i>	Annual Cudweed	
<i>Euphorbia dallachyana</i>	Flat Spurge	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Persicaria</i> spp.	Knotweed	
<i>Poa fordeana</i>	Forde Poa	
<i>Senecio</i> spp.	Groundsel	
<i>Stemodia florulenta</i>	Blue Rod	

Conditions when the EVC should not be assessed

None recognised but may be difficult to access and sample during floods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	15	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Small (to medium) aquatic to semi-aquatic herbs	2	5	
Medium aquatic to semi-aquatic non-tufted graminoids	1	5	
Medium (to tall) tufted grasses	1	5	
Medium (to tall) herbs	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cuscuta campestris</i>	Field Dodder
<i>Solanum nigrum</i> s.s.	Black Nightshade
<i>Xanthium strumarium</i> spp. agg.	Noogoora Burr species aggregate

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
	2-5%	Minor
Mass regeneration of River Red-gum <i>Eucalyptus camaldulensis</i>	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	30%

EVC 812: Grassy Riverine Forest/Riverine Swamp Forest Complex

Description:

Eucalypt dominated forest of flood-prone areas, where the understorey dominants (e.g. *Eleocharis acuta* and/or *Pseudoraphis spinescens*) of Riverine Swamp Forest (EVC 814) are conspicuous in association or fine-scale mosaic with the larger tussock species (principally *Paspalidium jubiflorum*) characteristic of Grassy Riverine Forest (EVC 106). Murray River system, very restricted outside of Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Alternanthera denticulata</i> s.l.	Lesser Joyweed	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	
Other conspicuous species		
<i>Cardamine moirensis</i>	Riverina Bitter-cress	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Centipeda minima</i> s.l.	Spreading Sneezeweed	
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	
<i>Eclipta platyglossa</i>	Yellow Twin-heads	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Persicaria</i> spp.	Knotweed	in particular <i>P. prostrata</i>
<i>Wahlenbergia fluminalis</i>	River Bluebell	

Notes on indicator species

E. camaldulensis, with *P. jubiflorum*, in association or mosaic with *E. acuta* and/or *P. spinescens* and other conspicuous species (as indicated above).

Conditions when the EVC should not be assessed

None recognised but may be difficult to access and sample during floods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	15	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Medium aquatic to semi-aquatic non-tufted graminoids	1	10	
Medium (to tall) tufted grasses	1	5	
Medium (to tall) herbs	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cuscuta campestris</i>	Field Dodder
<i>Solanum nigrum</i> s.s.	Black Nightshade
<i>Xanthium strumarium</i> spp. agg.	Noogoora Burr species aggregate

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
	2-5%	Minor
Mass regeneration of River Red-gum <i>Eucalyptus camaldulensis</i>	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	30%

EVC 124: Grey Clay Drainage-line Aggregate

Description:

Collective label for the various zones of vegetation associated with the inundation-prone habitat of slightly mineralized drainage-lines in more elevated parts of the basalt plains. The EVC is rare and localized, identified from very few locations, and includes habitat of the extremely localized *Carex tasmanica*. The vegetation of associated grassy terraces, subject to occasional inundation, has affinities with the non-wetland EVC Creekline Tussock Grassland (EVC 654). The components of Brackish Herbland (EVC 538) and Brackish Aquatic Herbland (EVC 537) are also variously recognizable within the vegetation aggregate. Rare, western Volcanic Plains.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Apium</i> spp.	Celery
<i>Asperula conferta</i>	Common Woodruff
<i>Calocephalus lacteus</i>	Milky Beauty-heads
<i>Carex tasmanica</i>	Curly Sedge
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Isolepis cernua</i>	Nodding Club-sedge
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush
<i>Lachnagrostis</i> spp.	Blown Grass
<i>Lobelia irrigua</i>	Salt Pratia
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Ranunculus diminutus</i>	Brackish Plains Buttercup
<i>Samolus repens</i>	Creeping Brookweed

Notes on indicator species

Various associations of the above species.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small to medium herbs	5	20	may be prostrate; semi-aquatic to damp soil species
Medium sedges and rushes	3	10	
Medium (to tall) tussock grasses	1	25	on drier edges

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cotula coronopifolia</i>	Water Buttons
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Hordeum</i> spp.	Barley Grass
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Nassella neesiana</i>	Chilean Needle-grass
<i>Parapholis</i> spp.	Barb Grass
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform separately and average

Structural dominant	Benchmark cover
Aquatic to semi-aquatic herbs	Any cover - assess for scoring category of >50% benchmark cover
Curly Sedge <i>Carex tasmanica</i> and/or Common Tussock Grass <i>Poa labillardierei</i>	50%

EVC 956: Herb-rich Gilgai Wetland

Description:

Herbland of very small, seasonally wet gilgai depressions on heavy soil plains, occurring as part of a mosaic within drier woodland and grassland formations. Where present, surrounding trees can include *Eucalyptus camaldulensis*, *Eucalyptus largiflorens*, *Eucalyptus microcarpa* and/or *Allocasuarina luehmannii*. Formerly widespread in lowland plains areas of northern and western Victoria, but now very rare as a consequence of agricultural practices.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus</i> spp.	Swamp Wallaby-grass
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eleocharis pusilla</i>	Small Spike-sedge
<i>Eleocharis pallens</i>	Pale Spike-sedge
<i>Goodenia</i> spp.	Goodenia
<i>Haloragis</i> spp.	Raspwort
<i>Isotoma fluviatilis</i> subsp. <i>australis</i>	Swamp Isotome
<i>Lobelia pratioides</i>	Poison Lobelia
<i>Lobelia concolor</i>	Poison Pratia
<i>Marsilea drummondii</i>	Common Nardoo
<i>Rumex tenax</i>	Narrow-leaf Dock

Conditions when the EVC should not be assessed

None recognised other than protracted drought conditions where the wetland component of the vegetation may not be detected.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small to medium herbs	5	10	species of damp soils rather than true aquatics
Small (to prostrate) semi-aquatic herbs	2	5	can include the ferns <i>Marsilea</i> spp.
Medium grasses	2	5	
Small (to medium) non-tufted graminoids	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus</i> spp.	Fox Tail
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Symphotrichum subulatum</i>	Aster-weed
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Perennial herbs	20%

EVC 708: Hypersaline Inland Saltmarsh Aggregate

Description:

Collective label for the various zones of vegetation associated with the floors and verges of hypersaline lakes. Typically comprising salt pan areas (sometimes occupied by aquatic halophytic monocots during wet phases), fringed by a monospecific (or nearly so) low shrubland of stunted succulent chenopods. Drier western and north-western Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Althenia</i> spp.	Water Mat
<i>Ruppia</i> spp.	Tassel
<i>Tecticornia</i> spp.	Glasswort

Conditions when the EVC should not be assessed

None recognised (other than Saline Aquatic Meadow component, if present, can be transitory following wet phases).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised (Saline Aquatic Meadow component not obligate).

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) herbs	3	+	present on mound crests or towards outer verges
Small (to medium) shrubs	1	5	succulent chenopods

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Hordeum</i> spp.	Barley Grass
<i>Bromus rubens</i>	Red Brome

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

EVC variously unvegetated. For vegetated zones, assess zones separately and average score.

Structural dominant	Benchmark cover
Glasswort <i>Tecticornia</i> spp.	10%
Water Mat <i>Althenia</i> spp. and/or Tassel <i>Ruppia</i> spp.	Assess for scoring category of >50% benchmark cover

EVC 813: Intermittent Swampy Woodland

Description:

Eucalypt (+/- Acacia) dominated woodland with (variously shrubby) rhizomatous sedgy - turf grass understorey, at best development dominated by flood-stimulated species in association with flora tolerant of inundation. The floristics are variable and often appear modified as a consequence of disturbance. Riverine floodplains of north-west and lake verges of Wimmera and southern Mallee.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia stenophylla</i>	Eumong	
<i>Calocephalus sonderi</i>	Pale Beauty-heads	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Cressa australis</i>	Rosinweed	
<i>Cyperus gymnocaulos</i>	Spiny Flat-sedge	
<i>Duma florulenta</i>	Tangled Lignum	open structure
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Eucalyptus largiflorens</i>	Black Box	Occasional associated canopy species
<i>Haloragis aspera</i>	Rough Raspwort	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Sphaeromorphaea littoralis</i>	Spreading Nut-heads	
<i>Sporobolus mitchellii</i>	Rat-tail Couch	
<i>Stemodia florulenta</i>	Blue Rod	
<i>Wahlenbergia fluminalis</i>	River Bluebell	

Notes on indicator species

Paspalidium jubiflorum typically a very minor species if present. In an extremely localized variant of flood-prone sandy terraces connected to the river or major floodway creeks, *Eragrostis* spp. and *Cynodon dactylon* var. *pulchellus* can be locally dominant - this variant is considered transitional towards Riverine Swamp Forest.

Conditions when the EVC should not be assessed

When habitat is subject to inundation. It should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees (eucalypts only)	1	10	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Tall shrubs (to small trees)	1	+	
Small (to medium) herbs	3	5	
Small (to medium) non-tufted graminoids	2	20	grasses and sedges

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Paspalum distichum</i>	Water Couch
<i>Phyla canescens</i>	Fog-fruit
<i>Suaeda baccifera</i>	Berry Seablite

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% cover	Scale of severity
Invasion by samphires	<1%	Minor
	1-5%	Moderate
	>5%	Severe
Invasion by lignum	5-10%	Minor
	10-20%	Moderate
	>20%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp.	20%

EVC A121: Intermittent Swampy Woodland/Floodway Pond Herbland Complex

Description:

An open woodland dominated by River Red-gum, sometimes with sparse Eumong, over a potentially diverse herbaceous ground-layer with a range of species shared with Floodway Pond Herbland (EVC 810) and potentially a component of species shared with Intermittent Swampy Woodland (EVC 813). It abuts Intermittent Swampy Woodland on higher ground. Recorded only from the Robinvale and Boort areas where very localised, but potentially more widespread on floodplains of the Murray River in the Victorian Mallee.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia stenophylla</i>	Eumong	sparse
<i>Alternanthera denticulata</i> s.s.	Lesser Joyweed	
<i>Cardamine moirensis</i>	Riverina Bitter-cress	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Centipeda minima</i> subsp. <i>minima</i> s.s.	Spreading Sneezeweed	
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	
<i>Eclipta platyglossa</i>	Yellow Twin-heads	
<i>Eleocharis acuta</i>	Common Spike-sedge	minor component
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Euchiton sphaericus</i>	Indian Cudweed	
<i>Euphorbia dallachyana</i>	Flat Spurge	
<i>Glinus lotoides</i>	Hairy Carpet-weed	
<i>Gnaphalium polycaulon</i>	Indian Cudweed	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Laphangium luteoalbum</i>	Jersey Cudweed	
<i>Lepidium pseudohyssopifolium</i>	Native Peppergrass	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	Clove-strip	minor component
<i>Myosurus australis</i>	Mousetail	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	minor component
<i>Persicaria lapathifolia</i>	Pale Knotweed	
<i>Picris squarrosa</i>	Squat Picris	
<i>Ranunculus pentandrus</i> var. <i>platycarpus</i>	Inland Buttercup	
<i>Rorippa eustylis</i>	Dwarf Bitter-cress	
<i>Senecio glossanthus</i> s.s.	Slender Groundsel	
<i>Sporobolus mitchellii</i>	Rat-tail Couch	minor component
<i>Wahlenbergia fluminalis</i>	River Bluebell	minor component

Conditions when the EVC should not be assessed

Discretion required during prolonged dry periods and following recent flooding.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	exclude young regeneration; also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Small (to medium) herbs	6	40	
Medium monocots, at least semi-aquatic or tolerant of seasonal inundation	2	+	Substantially modified if restricted to few individuals

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Ranunculus sceleratus</i> subsp. <i>sceleratus</i>	Celery Buttercup
<i>Rorippa palustris</i>	Marsh Yellow-cress
<i>Verbena supina</i>	Trailing Verbena
<i>Xanthium strumarium</i> s.l.	Noogoora Burr species aggregate

Conditions where weeds are considered to have a negligible impact

Opportunistic, flood-intolerant species present during dry periods.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		Cover	Scale of severity
River Red-gum <i>Eucalyptus camaldulensis</i> regeneration	patchy/dense	2-5%	Minor
	regeneration	10-20%	Moderate
	denser regeneration	>20%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	10%

EVC A119: Intermittent Swampy Woodland/Lake Bed Herbland Complex

Description:

Open eucalypt dominated woodland with a ground-layer including a substantial component of herbaceous species adapted to drying mud within lake beds. Some of these evade periods of prolonged inundation as seed, while others persist as dormant tuberous rootstocks. Occurs on the beds of less saline, relatively shallow lakes of the Wimmera and southern Mallee/western Riverina, with the herbaceous component expressing following drawdown.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Centipeda minima</i> s.l.	Spreading Sneezeweed
<i>Cressa australis</i>	Rosinweed
<i>Cullen cinereum</i>	Hoary Scurf-pea
<i>Dysphania pumilio</i>	Clammy Goosefoot
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Glossostigma elatinoides</i>	Small Mud-mat
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice
<i>Heliotropium curassavicum</i>	Smooth Heliotrope
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Laphangium luteoalbum</i>	Jersey Cudweed
<i>Malva weinmanniana</i>	Australian Hollyhock
<i>Polygonum plebeium</i>	Small Knotweed
<i>Senecio runcinifolius</i>	Tall Fireweed
<i>Sporobolus mitchellii</i>	Rat-tail Couch
<i>Trigonella suavissima</i>	Sweet Fenugreek
Aquatic species of wetter phases	
<i>Myriophyllum verrucosum</i>	Red Water-milfoil
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed

Conditions when the EVC should not be assessed

It may not be practicable to adequately assess the herbaceous vegetation if the wetland is deeply inundated or has been dry for a prolonged period.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Select relevant critical lifeforms according to whether habitat in wetter or dryer phases. Assessment of non-aquatic herbaceous flora should be based on exposed (i.e. not inundated) areas, and that of aquatic to amphibious species on wet to inundated areas.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium (to tall) herbs or herbaceous semi-shrubs	2	+	excluding opportunistic terrestrial species, assess during drier phases only; substantially modified if restricted to very few plants.
Aquatic to amphibious herbs	2	+	assess during wet phases only; substantially modified if restricted to very few plants.
Small (to medium) non-aquatic herbs (primarily annuals)	3	+	assess during drier phases only; substantially modified if restricted to very few plants.

+ denotes presence

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Invasion by chenopods (e.g. *Sclerolaena muricata*) and other non-wetland species.

Indicator of altered process		Cover	Scale of severity
Invasion by chenopods (e.g. <i>Rhagodia spinescens</i> , <i>Sclerolaena muricata</i> , <i>Tecticornia pergranulata</i>) and other non-wetland species	Incidental plants	Negligible	Minor
	Scattered plants	<5%	Moderate
	Frequent plants	>5%	Severe
Invasion by Tangled Lignum (<i>Duma florulenta</i>)	Incidental plants	Negligible	Minor
	Scattered plants	<5%	Moderate
	Frequent plants	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Trees (River Red-gum)	10%

EVC 822: Intermittent Swampy Woodland/Riverine Grassy Woodland Complex

Description:

Eucalypt (+/-Acacia) dominated woodland with (variously shrubby) rhizomatous sedgy-turf grass understorey, including mixtures of flood stimulated species in association with species characteristic of drier riverine woodlands. Rare, riverine floodplains of further north-west.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Brachyscome dentata</i>	Lobe-seed Daisy	
<i>Brachyscome paludicola</i>	Woodland Swamp-daisy	
<i>Cymbonotus lawsonianus</i>	Bear's-ear	
<i>Cyperus gymnocaulos</i>	Spiny Flat-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	+/- Black Box <i>Eucalyptus largiflorens</i>
<i>Lobelia concolor</i>	Poison Pratia	
<i>Rytidosperma</i> spp.	Wallaby Grass	
<i>Sporobolus mitchellii</i>	Rat-tail Couch	
<i>Vittadinia</i> spp.	New Holland Daisy	
<i>Wahlenbergia fluminalis</i>	River Bluebell	

Conditions when the EVC should not be assessed

When habitat is subject to more than shallow inundation. It should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium (to small) shrubs	2	+	substantially modified if restricted to very few plants and not at least scattered through vegetation
Medium herbs	5	5	
Small (to medium) non-tufted grasses and sedges	2	5	
Small (to medium) tufted grasses	1	2	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Bromus rubens</i>	Red Brome
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Hordeum</i> spp.	Barley Grass
<i>Mesembryanthemum nodiflorum</i>	Small ice-plant
<i>Phyla canescens</i>	Fog-fruit
<i>Schismus barbatus</i>	Arabian Grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicators	% cover	Scale of severity
Invasion by dryland chenopod shrubs (e.g. <i>Enchylaena</i> spp., <i>Rhagodia spinescens</i> , <i>Maireana</i> spp., but excluding <i>Atriplex</i> spp.)	1-5%	Minor
	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	20%

EVC 107: Lake Bed Herbland

Description:

Herbland dominated by species adapted to drying mud within lake beds. Some evade periods of prolonged inundation as seed, others as dormant tuberous rootstocks. Less saline lakes of north-western areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Austrobryonia micrantha</i>	Mallee Cucumber	localised species
<i>Cullen cinereum</i>	Hoary Scurf-pea	localised species
<i>Dysphania pumilio</i>	Clammy Goosefoot	
<i>Glossostigma</i> spp.	Mud Mat	
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice	
<i>Malva weinmanniana</i>	Australian Hollyhock	
<i>Solanum simile</i>	Oondoroo	
<i>Trigonella suavissima</i>	Sweet Fenugreek	

Conditions when the EVC should not be assessed

Inundated or prolonged dry conditions. Lake Bed Herbland has a transitory expression between lake bed drying and next inundation. Vegetation condition may be underscored following prolonged dry period.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs or herbaceous semi-shrubs	2	+	substantially modified if restricted to very few isolated plants
Small herbs	2	+	including sprawling species, substantially modified if restricted to very few isolated plants

+ denotes presence

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

Temporary occupation of lake-bed habitat, by small annual herbs and grasses, which is not related to the immediate post-drying phase of the wetland.

3. INDICATORS OF ALTERED PROCESSES

Indicators		% cover	Scale of severity
Invasion by chenopod shrubs		1-5%	Minor
		5-10%	Moderate
		>10%	Severe
Invasion by River Red-gum <i>Eucalyptus camaldulensis</i> saplings and/or Tangled Lignum <i>Duma florulenta</i>	Regeneration is patchy, confined to outer verges	<1%	Minor
	Regeneration is locally dense	1-5%	Moderate
		>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised, but note conditions when the EVC should not be assessed.

4. VEGETATION STRUCTURE AND HEALTH

Highly variable cover

Structural dominant	Benchmark cover
Medium to tall herbs or herbaceous semi-shrubs	Assess for scoring category of >50% of benchmark cover

EVC A122: Lake Bed Herbland/Floodway Pond Herbland Complex

Description:

Herbland dominated by species adapted to drying mud within small floodway lagoons, with floristics intermediate in character between Lake Bed Herbland (EVC 107) and Floodway Pond Herbland (EVC 810). Apparently very rare, far north-west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Atriplex</i> aff. <i>leptocarpa</i> (broad-leaf variant)	Creeping Saltbush
<i>Centipeda crateriformis</i> subsp. <i>crateriformis</i>	Lagoon Sneezeweed
<i>Glinus lotoides</i>	Hairy Carpet-weed
<i>Glycyrrhiza acanthocarpa</i>	Southern Liquorice
<i>Ranunculus pentandrus</i> var. <i>platycarpus</i>	Inland Buttercup
<i>Scleroblitum atriplicinum</i>	Starry Goosefoot
<i>Tetragonia moorei</i>	Annual Spinach

Conditions when the EVC should not be assessed

When inundated or following prolonged dry conditions. Much of the component flora has a transitory expression between the habitat drying and the next inundation. Vegetation condition may be underscored following either a prolonged dry period or very recent inundation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbaceous semi-shrubs	2	+	substantially modified if restricted to very few isolated plants
Medium (to small) herbs	4	20	including sprawling species

+ denotes presence

2. WEEDS

High threat weed species

None recognised

Conditions where weeds are considered to have a negligible impact

Temporary occupation of habitat, by small annual herbs and grasses, which is not related to the immediate post-drying phase of the wetland.

3. INDICATORS OF ALTERED PROCESSES

Indicators		% cover	Scale of severity
Invasion by chenopod shrubs (e.g. <i>Sclerolaena</i> spp., <i>Chenopodium nitrariaceum</i> , <i>Rhagodia spinescens</i>)		1-5%	Minor
		5-10%	Moderate
		>10%	Severe
Invasion by River Red-gum <i>Eucalyptus camaldulensis</i> or Black Box <i>Eucalyptus largiflorens</i> saplings	Regeneration is patchy, confined to outer verges	1-5%	Minor
	Regeneration is locally dense	5-10%	Moderate
		>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised, but note conditions when the EVC should not be assessed.

4. VEGETATION STRUCTURE AND HEALTH

Highly variable cover

Structural dominant	Benchmark cover
Herbs	40%

EVC 974: Lava Plain Ephemeral Wetland

Description:

Low herbland of small ephemeral wetlands within stony swales of geologically recent lava flows, on shallow brown loamy soils. Fringing dryland vegetation typically including *Melicytus* spp. (Tree Violet/Shrub Violet). Extremely restricted and localised, known only from near Mt Napier in the further south-west of the State and near Werribee.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Alternanthera</i> sp. 1 (Plains)	Plains Joyweed
<i>Carex inversa</i>	Knob Sedge
<i>Crassula peduncularis</i>	Purple Crassula
<i>Cullen parvum</i>	Small Scurf-pea
<i>Dichondra repens</i>	Kidney-weed
<i>Eleocharis pusilla</i>	Small Spike-sedge
<i>Haloragis aspera</i>	Rough Raspwort
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Lythrum hyssopifolia</i>	Small Loosestrife
<i>Marsilea costulifera</i>	Narrow-leaf Nardoo
<i>Oxalis</i> sp. aff. <i>exilis</i> (glabrescent)	Small-flower Wood-sorrel
<i>Pauridia vaginata</i>	Yellow Star
<i>Persicaria prostrata</i>	Creeping Knotweed
<i>Rumex brownii</i>	Slender Dock
<i>Rytidosperma caespitosum</i>	Common Wallaby-grass
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to small) tufted grasses	3	5
Small to medium herbs	8	15
Small (to medium) non-tufted graminoids	1	1

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cynara cardunculus</i> subsp. <i>flavescens</i>	Artichoke Thistle
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Mentha pulegium</i>	Pennyroyal
<i>Nassella hyalina</i>	Cane Needle-grass
<i>Nassella neesiana</i>	Chilean Needle-grass
<i>Paspalum</i> spp.	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Plantago lanceolata</i>	Ribwort
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock
<i>Symphyotrichum subulatum</i>	Aster Weed
<i>Trifolium repens</i> var. <i>repens</i>	White Clover
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

2. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Perennial herbs	30%

EVC 104: Lignum Swamp

Description:

A relatively heterogeneous group of species-poor wetlands dominated by robust and often dense Tangled Lignum. Scattered in lower rainfall areas of north and west, including rain-shadow areas on basalt.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Asperula gemella</i>	Twin-leaf Bedstraw
<i>Duma florulenta</i>	Tangled Lignum
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Marsilea drummondii</i>	Common Nardoo
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Scleroblitum atriplicinum</i>	Starry Goosefoot
<i>Senecio glossanthus</i> s.s.	Slender Groundsel
<i>Senecio runcinifolius</i>	Tall Fireweed

Conditions when the EVC should not be assessed

None recognised. However, it should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) shrubs	1	10	
Medium to tall herbs	3	5	
Small to prostrate herbs	3	5	
Medium to tall graminoids	1	+	substantially modified if restricted to very few isolated plants
Small non-tufted graminoids	1	+	substantially modified if restricted to very few isolated plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cynara cardunculus</i> subsp. <i>flavescens</i>	Artichoke Thistle
<i>Helminthotheca echioides</i>	Ox-tongue
<i>Lycium ferocissimum</i>	African Box-thorn
<i>Nassella trichotoma</i>	Serrated Tussock
<i>Phyla canescens</i>	Fog-fruit
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Samphire (e.g. <i>Tecticornia pergranulata</i>) invasion	<1%	Minor
	1-5%	Moderate
	>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tangled Lignum <i>Duma florulenta</i>	20%

EVC 823: Lignum Swampy Woodland

Description:

Tall, mostly dense shrub layer, dominated by Tangled Lignum, in association with a eucalypt and/or acacia dominated low woodland. The ground-layer includes a component of obligate wetland flora that is able to persist (even if dormant) over dry periods. Lower rainfall northern and western areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia stenophylla</i>	Eumong	
<i>Duma florulenta</i>	Tangled Lignum	
<i>Eucalyptus camaldulensis</i>	River Red-gum	stunted individuals may sometimes be present
<i>Eucalyptus largiflorens</i>	Black Box	

Conditions when the EVC should not be assessed

Rare instances when habitat is subject to more than shallow inundation. It should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	also substantially modified if living mature trees of at least medium size (>30 cm DBH for eucalypts) infrequent to absent
Medium (to tall) shrubs	1	15	
Small (to medium) herbs	4	5	
Scramblers	1	+	substantially modified if restricted to very few isolated plants
Medium grasses	2	5	
Small sedges	1	+	substantially modified if restricted to very few isolated plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Paspalum distichum</i>	Water Couch
<i>Phyla canescens</i>	Fog-fruit
<i>Suaeda baccifera</i>	Berry Seablite

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
<i>Typha</i> spp. invasion	<1%	Minor
	1-5%	Moderate
	>5%	Severe
<i>Tecticornia</i> spp. invasion	<1%	Minor
	1-5%	Moderate
	>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small trees, Black Box <i>Eucalyptus largiflorens</i> , River Red-gum <i>Eucalyptus camaldulensis</i> or Eumong <i>Acacia stenophylla</i>	20%

EVC 140: Mangrove Shrubland

Description:

Extremely species-poor shrubland vegetation of inter-tidal zone, dominated by mangroves. Sheltered embayments and tidal creeks east from Lake Connemara to the eastern side of Nooramunga Marine Coastal Park, with most extensive development within Corner Inlet and Western Port.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Avicennia marina</i>	Grey Mangrove

Notes on indicator species

Characteristically occurs as monospecific stands of *Avicennia marina*. In some stands, species from adjacent Coastal Saltmarsh Aggregate or Sea-grass Meadow can also be present.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall shrubs	1	7

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Sporobolus anglica</i>	Common Cord-grass
<i>Sporobolus x townsendii</i>	Townsend's Cord-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	% cover	Scale of severity
Colonization of mature stands by Saltmarsh species (e.g. <i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i> , <i>Tecticornia arbuscula</i>)	<1%	Minor
	1-5%	Moderate
	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall shrubs, Grey Mangrove <i>Avicennia marina</i>	15%

EVC 966: Montane Bog

Description:

Low heathy shrubland with sedge and moss components in boggy montane to sub-montane valley habitats. Can be fringed by or include sparse eucalypts, variously *E. pauciflora*, *E. stellulata*, *E. dalrympleana*, *E. rubida* and *E. delegatensis*. Rare, Central Highlands and East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
East Gippsland & Central Highlands		
<i>Baeckea utilis</i> s.l.	Mountain Baeckea	
<i>Blechnum penna-marina</i> subsp. <i>alpina</i>	Alpine Water-fern	
<i>Empodisma minus</i>	Spreading Rope-rush	
<i>Sphagnum</i> spp.	Peat Moss	
Central Highlands		
<i>Dracophyllum victoriana</i>	Victorian Richea	
<i>Epacris</i> spp.	Heath	notably <i>E. paludosa</i>
<i>Leptospermum grandifolium</i>	Mountain Tea-tree	can be present on verges or scattered through vegetation
<i>Nothofagus cunninghamii</i>	Myrtle Beech	can be present on verges or scattered through vegetation
<i>Oxalis magellanica</i>	Snowdrop Wood-sorrel	
<i>Wittsteinia vacciniacea</i>	Baw Baw Berry	
East Gippsland		
<i>Asperula conferta</i>	Common Woodruff	
<i>Baloskion australe</i>	Mountain Cord-rush	
<i>Carex appressa</i>	Tall Sedge	
<i>Eleocharis gracilis</i>	Slender Spike-sedge	
<i>Epacris breviflora</i>	Drumstick Heath	
<i>Epacris gunnii</i>	Ace of Spades	
<i>Festuca asperula</i>	Graceful Fescue	
<i>Hakea microcarpa</i>	Small-fruit Hakea	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Isolepis subtilissima</i>	Mountain Club-sedge	
<i>Leptinella filicula</i>	Mountain Cotula	
<i>Leptospermum myrtifolium</i>	Myrtle Tea-tree	
<i>Lobelia surrepens</i>	Mud Pratia	
<i>Machaerina gunnii</i>	Slender Twig-sedge	
<i>Myriophyllum pedunculatum</i>	Mat Water-milfoil	
<i>Poa costiniana</i>	Bog Snow-grass	
<i>Schoenus apogon</i>	Common Bog-sedge	
<i>Stylidium montanum</i>	Montane Swamp Triggerplant	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	3	10	often prickly-leaved.
Small shrubs	1	+	substantially modified if restricted to very few isolated plants
Medium (to tall) herbs	5	5	
Medium non-tufted graminoids	2	5	
Medium tufted grasses and sedges	2	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Erythranthe moschata</i>	Musk Monkey-flower
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium shrubs, variously Mountain Baeckea <i>Baeckea utilis</i> , Swamp Heath <i>Epacris paludosa</i> , Myrtle Tea-tree <i>Leptospermum myrtifolium</i> , <i>Hakea</i> spp.	20%

EVC A130: Montane Boggy Woodland

Description:

Woodland to open woodland with variably dense shrub-layer over a grassy-sedgy ground-layer. It is associated with low gradient boggy gullies influenced by cool-air drainage, mostly at montane elevations, but extending to sub-alpine habitat. Scattered locations, mostly in the further north-east; not recorded from the south-western part of the Victorian montane to sub-alpine zone.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eucalyptus stellulata</i>	Black Sallee	Usual dominant
<i>Eucalyptus pauciflora</i>	Snow Gum	
<i>Eucalyptus neglecta</i>	Omeo Gum	Rare dominant
<i>Eucalyptus rubida</i>	Candlebark	Occasional associated tree
<i>Eucalyptus dalrympleana</i>	Mountain Gum	Occasional associated tree
<i>Baeckea</i> spp.	Baeckea	
<i>Empodisma minus</i>	Spreading Rope-rush	
<i>Epacris breviflora</i>	Drumstick Heath	
<i>Epacris gunnii</i>	Ace of Spades	
<i>Hakea microcarpa</i>	Small-fruit Hakea	
<i>Poa</i> spp	Tussock Grass	
Various associated species		
<i>Acaena novae-zelandiae</i>	Bidgee-widgee	
<i>Asperula gunnii</i>	Mountain Woodruff	
<i>Baloskion australe</i>	Mountain Cord-rush	
<i>Carex gaudichaudiana</i>	Fen Sedge	
<i>Cotula alpina</i>	Alpine Cotula	
<i>Deyeuxia crassiuscula</i>	Thick Bent-grass	
<i>Goodenia montana</i>	Mountain Goodenia	
<i>Hookerchloa hookeriana</i>	Hooker Fescue	
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Juncus pauciflorus</i>	Loose-flower Rush	
<i>Leptospermum grandifolium</i>	Mountain Tea-tree	
<i>Leptospermum myrtifolium</i>	Myrtle Tea-tree	
<i>Luzula modesta</i>	Southern Woodrush	
<i>Oreomyrrhis ciliata</i>	Fringed Caraway	
<i>Poa costiniana</i>	Bog Snow-grass	
<i>Schoenus apogon</i>	Common Bog-sedge	
<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Trees	1	10
Medium (to tall) shrubs	4	10
Medium graminoids	4	10
Medium to small herbs	3	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Rubus fruticosus</i> spp. agg.	Blackberry
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Trees (<i>Eucalyptus</i> spp., usually <i>E. stellulata</i>)	20%

EVC 41: Montane Riparian Thicket

Description:

Closed shrubland vegetation of low-gradient drainage lines and sheltered soaks in gully-heads at montane to sub-alpine elevations, with a sparse but potentially diverse ground-layer including a range of species tolerant of shading and water-logging. Restricted to small areas of suitable habitat on higher mountain ranges.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Blechnum minus</i>	Spreading Rope-rush	
<i>Blechnum nudum</i>	Fishbone Water-fern	
<i>Blechnum penna-marina</i> subsp. <i>alpina</i>	Alpine Water-fern	
<i>Carex alsophila</i>	Forest Sedge	
<i>Carex appressa</i>	Tall Sedge	
<i>Chiloglottis</i> spp.	Bird-orchid	
<i>Dianella tasmanica</i>	Tasman Flax-lily	
<i>Gaultheria appressa</i>	Wax Berry	
<i>Isolepis subtilissima</i>	Mountain Club-sedge	
<i>Leptinella filicula</i>	Mountain Cotula	
<i>Leptospermum grandifolium</i>	Mountain Tea-tree	
<i>Mentha laxiflora</i>	Forest Mint	
<i>Nothofagus cunninghamii</i>	Myrtle Beech	stunted, in highest rainfall areas
<i>Olearia phlogopappa</i>	Dusty Daisy-bush	
<i>Polystichum proliferum</i>	Mother Shield-fern	
<i>Tasmannia lanceolata</i>	Mountain Pepper-bush	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall shrubs	3	30
Medium to large graminoids	3	10
Medium to small herbs	2	1
Ground ferns	2	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Rubus fruticosus</i> spp. agg.	Blackberry
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall shrubs (mainly <i>Leptospermum grandifolium</i> , sometimes <i>Nothofagus cunninghamii</i>)	60%

EVC 40: Montane Riparian Woodland

Description:

Low open woodland on peat-rich soils of stream flats at montane elevations, with ground layer comprising a dense sward of grasses, herbs and sedges. A dense riparian shrub layer can also be present. Restricted distribution in eastern Victoria, principally on tablelands of East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Anthosachne scabra</i> s.l.	Common Wheat-grass	
<i>Blechnum minus</i>	Soft Water-fern	
<i>Blechnum penna-marina</i> subsp. <i>alpina</i>	Alpine Water-fern	
<i>Carex appressa</i>	Tall Sedge	
<i>Carex gaudichaudiana</i>	Fen Sedge	
<i>Deyeuxia quadriseta</i>	Reed Bent-grass	
<i>Epilobium gunnianum</i>	Gunn's Willow-herb	
<i>Eucalyptus camphora</i> subsp. <i>humeana</i>	Mountain Swamp-gum	
<i>Eucalyptus stellulata</i>	Black Sally	(sometimes with Narrow-leaf Peppermint <i>Eucalyptus radiata</i> and/or Candlebark <i>Eucalyptus rubida</i>)
<i>Geranium potentilloides</i>	Soft Crane's-bill	
<i>Gratiola peruviana</i>	Austral Brooklime	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Leptospermum grandifolium</i>	Mountain Tea-tree	
<i>Leptospermum myrtifolium</i>	Myrtle Tea-tree	
<i>Poa labillardierei</i>	Common Tussock-grass	
<i>Ranunculus lappaceus</i>	Common Buttercup	
<i>Rubus parvifolius</i>	Small-leaf Bramble	
<i>Veronica gracilis</i> s.l.	Slender Speedwell	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Life-forms should be assessed separately within shrubby zone where this is present.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

(Assess trees overall and the two zones separately and combine totals for life-forms if both zones present)

Critical lifeform	No. spp.	% Cover
Small trees	1	7
Zones dominated by shrubs:		
Medium to tall shrubs	3	20
Small to medium herbs	6	10
Small to medium graminoids	3	10
Zones dominated by medium to large graminoids:		
Medium (to large) tufted graminoids	3	20
Medium (to large) non-tufted graminoids	3	10
Small to medium herbs	6	10
Ground ferns	1	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Acetosella vulgaris</i>	Sheep Sorrel
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Rosa rubiginosa</i>	Sweet Briar
<i>Rubus fruticosus</i> spp. agg.	Blackberry
<i>Rumex crispus</i>	Curled Dock
<i>Trifolium</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where respective zones present, score each lifeform independently within its zone of dominance to co-dominance and average the value obtained. These zones may overlap.

Structural dominant	Benchmark cover
Trees	15%
Medium (to tall) shrubs	40%
Medium (to large) tufted graminoids	20%
Medium (to large) non-tufted graminoids	40%

EVC 148: Montane Sedgeland

Description:

Sedgy-herbaceous wetland communities around springs, soaks and low-gradient drainage-lines at montane elevations. Very localised distribution in high rainfall areas of Central Highlands and East Gippsland, occurring in association with Montane Riparian Thicket or Montane Riparian Woodland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Acaena novae-zelandiae</i>	Bidgee-widgee
<i>Hookerchloa hookeriana</i>	Hooker Fescue
<i>Blechnum penna-marina</i> subsp. <i>alpina</i>	Alpine Water-fern
<i>Carex alsophila</i>	Forest Sedge
<i>Carex appressa</i>	Tall Sedge
<i>Carex gaudichaudiana</i>	Fen Sedge
<i>Oreomyrrhis eriopoda</i>	Australian Caraway
<i>Deyeuxia innominata</i>	Short Bent-grass
<i>Eleocharis gracilis</i>	Slender Spike-sedge
<i>Epilobium</i> spp.	Willow Herb
<i>Geranium potentilloides</i>	Soft Crane's-bill
<i>Gonocarpus micranthus</i>	Creeping Raspwort
<i>Hierochloa redolens</i>	Sweet Holy-grass
<i>Hydrocotyle</i> spp.	Pennywort
<i>Hydrocotyle tripartita</i>	Slender Pennywort
<i>Hypericum japonicum</i>	Matted St John's Wort
<i>Juncus alexandri</i>	Mountain Rush
<i>Lobelia surrepens</i>	Mud Pratia
<i>Luzula modesta</i>	Southern Woodrush
<i>Poa ensiformis</i>	Sword Tussock-grass
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Sphagnum</i> spp.	Peat Moss
<i>Veronica gracilis</i>	Slender Speedwell
<i>Veronica subtilis</i>	Thread Speedwell

Conditions when the EVC should not be assessed

More than superficial snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) sedges	2	30
Medium (to tall) grasses	3	2
Small (to medium) herbs	7	5
Ferns	1	+

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Cirsium vulgare</i>	Spear Thistle
<i>Erythranthe moschata</i>	Musk Monkey-flower
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Lotus uliginosus</i>	Greater Bird's-foot Trefoil
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus anglocandicans</i>	Blackberry
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Carex</i> spp.	60%

EVC 318: Montane Swamp

Description:

Sedgy-herbaceous montane wetland communities (e.g. Morass Creek near Benambra). The relevant low, shrubby vegetation of boggy flats (as previously included within Montane Swamp) is referred to Montane Bog (EVC 966). Rare, East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Carex appressa</i>	Tall Sedge
<i>Hydrocotyle rivularis</i>	Benambra Pennywort
<i>Myriophyllum</i> spp.	Water-milfoil
<i>Ranunculus</i> spp.	Buttercup

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) aquatic herbs	3	25
Medium (to tall) sedges	1	5

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform separately and average.

Structural dominant	Benchmark cover
Sedges e.g. <i>Carex</i> spp.	10%
Aquatic herbs	50%

EVC 185: Perched Boggy Shrubland Aggregate

Description:

Mosaic of dense shrubland variously in association with a sedgy-herbaceous ground-layer in which mosses can be abundant, occurring on reliably saturated soils associated with impeding layers, soaks and springs. Swampy Riparian Woodland (EVC 83) occurs in similar habitats to Perched Boggy Shrubland, but the former is associated with flowing water. In its initial description, “Perched Boggy Shrubland Complex” was reported as always surrounded by the terrestrial EVC Herb-rich Foothill Forest (EVC 23). Very restricted extent, confined to the north-east of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Acacia verticillata</i>	Prickly Moses
<i>Baeckea utilis</i> s.s.	Mountain Baeckea
<i>Eleocharis gracilis</i>	Slender spike-sedge
<i>Epacris breviflora</i>	Drumstick Heath
<i>Eriocaulon scariosum</i>	Common pipewort
<i>Gahnia</i> spp.	Saw Sedge
<i>Gonocarpus micranthus</i>	Creeping Raspwort
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Machaerina</i> spp.	Twig Sedge
<i>Ranunculus</i> spp.	Buttercup
<i>Sphagnum</i> spp.	Peat Moss

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	1	20	within relevant zone
Medium (to tall) herbs	3	5	
Small (to prostrate) herbs	3	1	
Medium to tall graminoids	5	25	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Rubus</i> spp.	Bramble

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess each zone dominated by each lifeform and average scores.

Structural dominant	Benchmark cover
Medium shrubs (e.g. Mountain Baeckea <i>Baeckea utilis</i> , Tea-tree <i>Leptospermum</i> spp.)	50%
Medium to tall graminoids	50%

EVC 125: Plains Grassy Wetland

Description:

Grassy-herbaceous vegetation of shallow seasonal wetlands of fertile lowland plains, characteristically species-rich (at least on verges) when relatively intact. Zones interpreted as representing complexes between Plains Grassy Wetland and several other wetland EVCs are frequently present. Formerly widespread in lowland plains areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass
<i>Amphibromus</i> spp.	Swamp Wallaby-grass
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eleocharis pusilla</i>	Small Spike-sedge
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
Herbs on the verge zones of relatively intact sites	
<i>Allittia cardiocarpa</i>	Swamp Daisy
<i>Craspedia paludicola</i>	Swamp Billy-buttons
<i>Eryngium vesiculosum</i>	Prickfoot
<i>Coronidium gunnium</i>	Pale Swamp Everlasting
<i>Microseris scapigera</i> s.s.	Plains Yam-daisy
<i>Montia australasica</i>	White Purslane
<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed

Notes on indicator species

Eragrostis infecunda occurs in lower rainfall versions (e.g. Wimmera and rain shadow basalt plains west of Melbourne).

Conditions when the EVC should not be assessed

None recognised (subject to water quality adequate to view attached vegetation in wetland shallows).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs	2	+	of fringing zone, species of damp soils rather than true aquatics
Medium (to tall) aquatic to semi-aquatic herbs	3	1	
Small (to prostrate) semi-aquatic herbs	3	5	can include small to medium attached ferns (e.g. species of <i>Marsilea</i> and <i>Isoetes</i>)
Medium (to tall) grasses	3	15	sometimes also including cane grass
Small (to medium) non-tufted graminoids	2	5	excluding grasses

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name	Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent	<i>Mentha pulegium</i>	Pennyroyal
<i>Alisma lanceolatum</i>	Water Plantain	<i>Nassella</i> spp.	Needle Grass
<i>Alopecurus</i> spp.	Fox Tail	<i>Paspalum</i> spp.	Paspalum
<i>Cirsium vulgare</i>	Spear Thistle	<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Cotula coronopifolia</i>	Water Buttons	<i>Plantago lanceolata</i>	Ribwort
<i>Helminthotheca echinoides</i>	Ox-tongue	<i>Rumex conglomeratus</i>	Clustered Dock
<i>Holcus lanatus</i>	Yorkshire Fog	<i>Rumex crispus</i>	Curled Dock
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush	<i>Trifolium repens</i> var. <i>repens</i>	White Clover
<i>Juncus bulbosus</i>	Bulbous Rush	<i>Triglochin scilloides</i>	Lilaea
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit		

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Scale of severity
Invasion of woody species, principally tea-tree/paperbark	Incidental regeneration of shrubs within open area of wetland
	Invasion front evident around margins of open area
	Regeneration conspicuous on wetland floor
	Minor
	Moderate
	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Perennial native grasses, various combinations of Brown-back Wallaby-grass <i>Rytidosperma duttonianum</i> , Wetland Wallaby-grass <i>Rytidosperma semiannulare</i> , Southern Cane-grass <i>Eragrostis infecunda</i> , Australian Sweet-grass <i>Glyceria australis</i> , Swamp Wallaby-grass <i>Amphibromus</i> spp. and Common Tussock-grass <i>Poa labillardierei</i>	30%

EVC 755: Plains Grassy Wetland/Aquatic Herbland Complex

Description:

Structural dominants of Plains Grassy Wetland (EVC 125), with aquatic herbs also prevalent. Scattered on western basalt plains, especially in cooler areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Cyanogeton</i> spp.	Water Ribbons	
<i>Glyceria australis</i>	Australian Sweet-grass	
<i>Montia australasica</i>	White Purslane	
<i>Myriophyllum</i> spp.	Water-milfoil	notably <i>Myriophyllum variifolium</i>
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed	
<i>Rumex bidens</i>	Mud Dock	

Conditions when the EVC should not be assessed

Subject to water clarity. Must be adequate to view attached vegetation in wetland shallows. Discretion may be required in interpreting scores derived during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium aquatic herbs	2	+	cover may be various
Medium (to tall) grasses	2	2	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name	Comments
<i>Agrostis capillaris</i>	Brown-top Bent	on verges
<i>Alisma lanceolatum</i>	Water Plantain	
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	on verges
<i>Aponogeton distachyos</i>	Cape Pond-lily	
<i>Callitriche stagnalis</i>	Common Starwort	
<i>Cotula coronopifolia</i>	Water Buttons	
<i>Holcus lanatus</i>	Yorkshire Fog	on verges
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush	
<i>Juncus bulbosus</i>	Bulbous Rush	
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit	on verges
<i>Nassella</i> spp.	Needle Grass	on verges
<i>Nasturtium officinale</i>	Watercress	
<i>Nymphaea</i> spp.	Waterlily	
<i>Paspalum distichum</i>	Water Couch	
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	on verges
<i>Triglochin scilloides</i>	Lilaea	

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised, but note conditions when the EVC should not be assessed.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) grasses	10%

EVC 767: Plains Grassy Wetland/Brackish Herbland Complex

Description:

Structural dominants of Plains Grassy Wetland (EVC 125) in association with herbaceous species characteristic of Brackish Herbland (EVC 538). Very restricted and scattered occurrences on western basalt plains, with disjunct outlier at Lake Omeo.

Indicator species (some or all of these species should be present)

Scientific name	Common name
Montane Community (Lake Omeo)	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Schoenus nitens</i>	Shiny Bog-sedge
Western Volcanic Plains	
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Lobelia irrigua</i>	Salt Pratia
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Samolus repens</i>	Creeping Brookweed
<i>Triglochin striata</i>	Streaked Arrowgrass
<i>Wilsonia rotundifolia</i>	Round-leaf Wilsonia
Western Volcanic Plains & Montane Community (Lake Omeo)	
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Isolepis cernua</i>	Nodding Club-sedge
<i>Ranunculus diminutus</i>	Brackish Plains Buttercup

Conditions when the EVC should not be assessed

Subject to water clarity. Must be adequate to view attached vegetation in wetland shallows. Discretion may be required in interpreting scores derived during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) halophytic herbs	4	20	frequently prostrate
Small (to medium) sedges	2	5	
Medium (to tall) grasses	2	10	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula coronopifolia</i>	Water Buttons
<i>Hordeum</i> spp.	Barley Grass
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Polypogon monspeliensis</i>	Annual Beard-grass
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass
<i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Strawberry Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) grasses	20%

EVC 958: Plains Grassy Wetland/Calcareous Wet Herbland Complex

Description:

Structural dominants (and some of key indicator dicot herbs) of Plains Grassy Wetland (EVC 125) in association with a low mat of herbs indicative of wet calcareous conditions. Extremely rare, in south-west (near Casterton).

Indicator species (some or all of these species should be present)

Scientific name	Common name
Dominant species	
<i>Asperula subsimplex</i>	Water Woodruff
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Hydrocotyle muscosa</i>	Mossy Pennywort
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Senecio psilocarpus</i>	Swamp Fireweed
Associated species	
<i>Cycnogeton</i> spp.	Water Ribbons
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed

Conditions when the EVC should not be assessed

None recognised, but subject to adequate water quality to view attached vegetation in the shallows.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) rhizomatous herbs	5	20	
Medium (to tall) grasses	2	15	
Small (to medium) sedges	3	5	including semi-aquatics

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alopecurus</i> spp.	Fox Tail
<i>Callitriche stagnalis</i>	Common Starwort
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) grasses	30%

EVC A101: Plains Grassy Wetland/Lignum Swamp Complex

Description:

Open shrubland with a grassy ground-layer including structural and floristic components (grasses and dicot herbs) of Plains Grassy Wetland (EVC 125), occurring in association with Tangled Lignum (or sometimes Spiny Lignum or Cane Grass). Scattered sites in the Riverina, where previously more extensive along ephemeral drainage-lines, also Victorian Volcanic Plains where very restricted in extent.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Austrostipa</i> spp.	Spear Grass
<i>Chloris truncata</i>	Windmill Grass
<i>Duma horrida</i> subsp. <i>horrida</i>	Spiny Lignum
<i>Duma florulenta</i>	Tangled Lignum
<i>Eragrostis australasica</i>	Cane Grass
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Goodenia</i> spp.	Goodenia
<i>Haloragis aspera</i>	Rough Raspwort
<i>Juncus flavidus</i>	Gold Rush
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Lobelia concolor</i>	Poison Pratia
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Senecio runcinifolius</i>	Tall Fireweed
<i>Walwhalleya proluta</i>	Rigid Panic

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) shrubs	1	5
Medium (to tall) grasses	5	25
Medium (to small) herbs	3	5
Tall herbs/scramblers	1	+

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Phyla canescens</i>	Fog Fruit
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by robust dryland species (e.g. <i>Rhagodia spinescens</i> , <i>Nitraria billardierei</i>)	Incidental plants	Negligible
	Scattered plants	<1%
	Frequent plants	>1%
Invasion by samphire (<i>Tecticornia pergranulata</i>)	Incidental plants	Negligible
	Scattered plants	<1%
	Frequent plants	>1%

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Duma florulenta</i>	10%

EVC 959: Plains Grassy Wetland/Sedge-rich Wetland Complex

Description:

Treeless seasonal wetland with association of Black Bristle-sedge, indicative of Sedge-rich Wetland (EVC 281), with species characteristic of Plains Grassy Wetland (EVC 125). Very rare, scattered sites on western basalt plains, also Wimmera (e.g. State Forest north of White Lake).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
Dominant species		
<i>Chorizandra enodis</i>	Black Bristle-sedge	
<i>Craspedia paludicola</i>	Swamp Billy-buttons	In high quality sites
Associated species		
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Allittia cardiocarpa</i>	Swamp Daisy	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eleocharis pusilla</i>	Small Spike-sedge	
<i>Eryngium vesiculosum</i>	Prickfoot	
<i>Glyceria australis</i>	Australian Sweet-grass	
<i>Lachnagrostis semibarbata</i>	Purple Blown-grass	
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass	
<i>Microseris scapigera</i> s.s.	Plains Yam-daisy	
<i>Ornduffia reniformis</i>	Running Marsh-flower	
<i>Pentapogon quadrifidus</i> var. <i>quadrifidus</i>	Five-awned Spear-grass	
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed	
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass	
<i>Schoenus apogon</i>	Common Bog-sedge	

Conditions when the EVC should not be assessed

None recognised, but subject to adequate water quality to view attached vegetation in the shallows.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium herbs	3	5
Medium tough-leaved sedges	1	2
Medium (to tall) grasses	3	15

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) grasses	30%

EVC 960: Plains Grassy Wetland/Spike-sedge Wetland Complex

Description:

Low open wetland vegetation dominated by Common Spike-sedge with a sparse component of species characteristic of Plains Grassy Wetland (EVC 125). Scattered sites, mostly in western Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eragrostis infecunda</i>	Southern Cane-grass	Component of low rainfall variants
<i>Glyceria australis</i>	Australian Sweet-grass	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass	
<i>Montia australasica</i>	White Purslane	
<i>Potamogeton tricarinatus</i> s.l.	Floating Pondweed	

Conditions when the EVC should not be assessed

Subject to water clarity. Must be adequate to view attached vegetation in wetland shallows. Discretion may be required in interpreting scores derived during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to small) aquatic to semi-aquatic herbs	3	5
Medium (to small) sedges	2	5
Medium (to tall) grasses	2	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Paspalum distichum</i>	Water Couch
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) grasses	10%

EVC 961: Plains Rushy Wetland

Description:

Rush dominated wetlands with floristic affinities to Plains Grassy Wetland (EVC 125). Scattered on plains of central western and north-central areas of Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Juncus flavidus</i>	Gold Rush
<i>Juncus semisolidus</i>	Plains Rush
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass

Conditions when the EVC should not be assessed

None recognised, subject to water quality adequate for viewing attached vegetation in wetland shallows. Discretion may be required in interpreting scores derived during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to medium) herbs	5	5
Small (to medium) sedges	2	5
Medium (to tall) rushes/reeds	2	10

2. WEEDS

High threat weed species

Scientific name	Common name	Comments
<i>Callitriche stagnalis</i>	Common Starwort	
<i>Cirsium vulgare</i>	Spear Thistle	
<i>Cotula coronopifolia</i>	Water Buttons	
<i>Holcus lanatus</i>	Yorkshire Fog	
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit	
<i>Nassella neesiana</i>	Chilean Needle-grass	
<i>Paspalum distichum</i>	Water Couch	
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	on verges
<i>Rumex conglomeratus</i>	Clustered Dock	
<i>Rumex crispus</i>	Curled Dock	

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) rushes/reeds	20%

EVC 888: Plains Saltmarsh Aggregate

Description:

Low, primarily herbaceous (to grassy) vegetation of salinised heavy soils in seasonally or intermittently waterlogged shallow depressions on lowland plains, dominated by species of *Salicornia* and *Suaeda*, rather than species of *Tecticornia* and/or *Frankenia* as in Samphire Shrubland (EVC 101). Plains Saltmarsh Aggregate is frequently included (and mapped) as a component of Saline Lake Aggregate (EVC 717). Scattered in less arid western areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Puccinellia perlaxa</i>	Plains Saltmarsh-grass
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
<i>Samolus repens</i>	Creeping Brookweed
<i>Suaeda australis</i>	Austral Seablite

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Succulent chenopod (Glassworts)	1	5	fleshy-stemmed, leafless
Small (to medium) halophytic herbs	5	10	
Medium grasses	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Hordeum</i> spp.	Barley Grass
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Polypogon monspeliensis</i>	Annual Beard-grass
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass
<i>Thinopyrum obtusiflorum</i>	Tall Wheat-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

The benchmark cover for the three structural dominants combined is 50%, excluding shallow ponds or unvegetated saltpans. Structural dominants may be mixed together or stratified. Score health of each group which is present separately and average the scores.

Structural dominant	Benchmark cover
Succulent chenopods	combined 50%
Halophytic herbs	
Plains Saltmarsh-grass <i>Puccinellia perlaxa</i>	

EVC 647: Plains Sedgy Wetland

Description:

Sedge dominated wetland vegetation of lowland plains, with conspicuous and potentially diverse herbaceous component, including species characteristically associated with wet sites on fertile soils. Moisture supply appears to be more reliable (e.g. associated with springs/seepage) than for sites supporting Plains Grassy Wetland (EVC 125). Plains Sedgy Wetland can occur in mosaic or complex with Plains Grassy Wetland and Aquatic Herbland (EVC 653). Some variants attributed to Plains Sedgy Wetland approach Sedge Wetland (EVC 136) but can be distinguished by substantial presence of the herb-rich component shared with Plains Grassy Wetland. Scattered on plains and tablelands mostly on and south of the Divide.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus</i> spp.	Swamp Wallaby-grass
<i>Carex tereticaulis</i>	Poong'ort
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Machaerina arthropophylla</i>	Fine Twig-sedge
<i>Montia australasica</i>	White Purslane
<i>Stellaria angustifolia</i> subsp. <i>angustifolia</i>	Swamp Starwort
Highest quality sites	
<i>Allittia cardiocarpa</i>	Swamp Daisy
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting
<i>Craspedia paludicola</i>	Swamp Billy-buttons
<i>Microseris scapigera</i> s.s	Plains Yam-daisy
<i>Senecio psilocarpus</i>	Swamp Fireweed
<i>Xerochrysum palustre</i>	Swamp Everlasting

Notes on indicator species

Conditions when the EVC should not be assessed

None recognised (subject to water quality adequate to view attached vegetation in wetland shallows).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs	3	15	including semi-aquatic species
Small herbs	5	1	
Medium (to tall) sedges	1	15	
Small (to medium) non-tufted sedges	2	10	
Medium grasses	3	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) sedges, either Fine Twig-sedge <i>Machaerina arthropphylla</i> , or Poong'ort <i>Carex tereticaulis</i>	30%

EVC 1010: Plains Sedgy Wetland/Sedge Wetland Complex

Description:

Sedge dominated wetland vegetation of cooler lowland plains, with structural characteristics of Sedge Wetland (EVC 136), but including herbaceous species characteristically associated with wet sites on fertile soils as for Plains Sedgy Wetland (EVC 647). Rare, disjunct sites in southern Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Allittia cardiocarpa</i>	Swamp Daisy
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting
<i>Craspedia paludicola</i>	Swamp Billy-buttons
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Lepyrodia muelleri</i>	Common Scale-rush
<i>Machaerina arthropphylla</i>	Fine Twig-sedge
<i>Schoenus apogon</i>	Common Bog-sedge
<i>Schoenus tesquorum</i>	Soft Bog-sedge
<i>Senecio psilocarpus</i>	Swamp Fireweed
<i>Xerochrysum palustre</i>	Swamp Everlasting

Conditions when the EVC should not be assessed

Subject to water clarity. Must be adequate to view attached vegetation in wetland shallows.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

The structure of the vegetation can be highly variable – estimate covers on overall basis for broader wetland area.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) aquatic to semi-aquatic herbs	2	+	any cover
Medium (to tall) sedges	3	15	
Medium grasses	3	5	
Small (to medium) sedges	2	+	any cover

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) sedges, either Pithy Sword-sedge <i>Lepidosperma longitudinale</i> or Fine Twig-sedge <i>Machaerina arthropphylla</i>	30%

EVC 283: Plains Sedgy Woodland

Description:

Woodland, mostly eucalypt dominated, occurring in seasonally inundated shallow depressions on broad plains, within floodplains and fringing dunes. The most similar EVCs are Seasonally Inundated Shrubby Woodland (EVC 195), or in wettest forms, Red Gum Swamp (EVC 292) or Sedge-rich Wetland (EVC 281). The vegetation is typically species-rich (at least in drier sites/on verges) with many species (notably geophytes) at low frequencies. South-western areas, principally in the vicinity of the Grampians.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Allocasuarina luehmannii</i>	Buloke	Occasional component
<i>Chorizandra enodis</i>	Black Bristle-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	sometimes with <i>Eucalyptus leucoxylon</i> , <i>Eucalyptus melliodora</i> and/or <i>Eucalyptus microcarpa</i>
<i>Isolepis fluitans</i>	Floating Club-sedge	
<i>Lepidosperma</i> spp.	Sword Sedge	variously <i>L. longitudinale</i> , <i>L. curtisiae</i> , <i>L. laeve</i> and <i>L. hispidulum</i>
<i>Leptospermum</i> spp.	Tea Tree	sparse
<i>Ornduffia reniformis</i>	Running Marsh-flower	
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed	
<i>Schoenus tesquorum</i>	Soft Bog-sedge	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Trees	2	5
Tall herbs	2	5
Small (to medium) herbs	7	10
Tall (to medium) graminoids	2	15
Small (to medium) graminoids	5	15

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

Many annual herbs and grasses are highly invasive into this vegetation, but are regarded as low threat.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Trees, <i>Eucalyptus</i> spp. and potentially Buloke <i>Allocasuarina luehmannii</i>	10%

EVC 651: Plains Swampy Woodland

Description:

Eucalypt dominated woodland with tussocky (grassy/sedgy) ground-layer, which includes herbs characteristic of poorly-drained, seasonally waterlogged, dark clay soils of paludal deposits on cooler lowland plains. Its context appears to have been mainly dampland, but extending into marginal wetland situations, wetland verges or as a dampland-wetland mosaic. Formerly scattered, mostly on southern plains of Victoria, but now much depleted.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia melanoxylon</i>	Blackwood	
<i>Carex</i> spp.	Sedge	
<i>Centella cordifolia</i>	Centella	
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	
<i>Eryngium vesiculosum</i>	Prickfoot	
<i>Eucalyptus ovata</i> subsp. <i>ovata</i>	Swamp Gum	occasionally <i>Eucalyptus camaldulensis</i> or <i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>
<i>Lachnagrostis</i> spp.	Blown Grass	
<i>Lobelia</i> spp.	Lobelia	
<i>Poa labillardierei</i>	Common Tussock-grass	
Shrubs in highest rainfall plains areas		
<i>Allocasuarina paludosa</i>	Scrub Sheoak	
<i>Leptospermum continentale</i>	Prickly Tea-tree	
<i>Ozothamnus ferrugineus</i>	Tree Everlasting	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Trees	1	5
Medium shrubs to small trees	1	5
Medium (to tall) herbs	4	10
Medium (to tall) graminoids	3	15
Small (to medium) graminoids	3	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Festuca arundinacea</i>	Tall Fescue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Nassella neesiana</i>	Chilean Needle-grass
<i>Paspalum</i> spp.	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp., principally Swamp Gum <i>E. ovata</i> subsp. <i>ovata</i> or River Red-gum <i>E. camaldulensis</i>	10%

EVC 784: Plains Swampy Woodland/Lignum Swamp Complex

Description:

Vegetation including a mixture of structural components of Plains Swampy Woodland (EVC 651) and Lignum Swamp (EVC 104), but without the floristic attributes of Red Gum Swamp (EVC 292). Extremely rare, drier volcanic plains, mainly in rainshadow area to the west of Melbourne.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus</i> spp.	Swamp Wallaby-grass
<i>Duma florulenta</i>	Tangled Lignum
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Lythrum hyssopifolia</i>	Small Loosestrife
<i>Ottelia ovalifolia</i> subsp. <i>ovalifolia</i>	Swamp Lily
<i>Persicaria prostrata</i>	Creeping Knotweed
<i>Poa labillardierei</i>	Common Tussock-grass
<i>Rytidosperma</i> spp.	Wallaby Grass
<i>Schoenus apogon</i>	Common Bog-sedge

Conditions when the EVC should not be assessed

None recognised, but discretion may be required during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but the aquatic herbland component may not be apparent during prolonged dry conditions.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Trees	1	5
Medium (to tall) shrubs	1	5
Small (to medium) aquatic to semi-aquatic herbs	2	5
Medium (to tall) grasses	2	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	10%

EVC 292: Red Gum Swamp

Description:

Eucalypt dominated woodland of swampy depressions of lowland plains, with sedgy-herbaceous understorey including aquatic species. Scattered on lowland plains, principally in the Riverina and south-west of Wimmera, extremely rare on the western volcanics.

Indicator species (some or all of these species should be present)

Scientific name	Common name	
<i>Carex tereticaulis</i>	Poong'ort	or rarely <i>Machaerina arthropphylla</i> and <i>Lepidosperma longitudinale</i>
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	or sometimes <i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>
<i>Marsilea drummondii</i>	Common Nardoo	
<i>Myriophyllum crispatum</i>	Upright Water-milfoil	

Conditions when the EVC should not be assessed

None recognised subject to visibility of attached vegetation within wetland shallows. Discretion can be required during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Aquatic herbs	2	5	
Medium (to tall) grasses	3	10	around outer zones of wetland
Medium (to tall) sedges	2	10	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Phyla canescens</i>	Fog-fruit
<i>Sagittaria</i> spp.	Sagittaria

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Dense River Red-gum <i>Eucalyptus camaldulensis</i> regeneration	2-5%	Minor
	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	10%

EVC A114: Red Gum Swamp/Cane Grass Wetland Complex

Description:

Species-poor wetland vegetation transitional between the component EVCs (EVCs 292 and 291 respectively), with River Red Gum occurring in association with Southern Cane-grass and a component of aquatic herbs. Rare, recorded from the Wimmera, northern Volcanic Plains and lowland north-east of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Azolla</i> spp.	Azolla
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eragrostis infecunda</i>	Southern Cane-grass
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Limosella australis</i>	Austral Mudwort
<i>Myriophyllum crispatum</i>	Upright Water-milfoil
<i>Ottelia ovalifolia</i> subsp. <i>ovalifolia</i>	Swamp Lily
<i>Potamogeton sulcatus</i>	Furrowed Pondweed
<i>Utricularia australis</i>	Yellow Bladderwort

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium to tall grasses	1	10	
Medium to small sedges	1	+	substantially modified if restricted to very few isolated plants
Small to medium herbs	4	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus camaldulensis</i>	10%

EVC A115: Red Gum Swamp/Plains Rushy Wetland Complex

Description:

Wetland vegetation transitional between the component EVCs (EVCs 292 and 961 respectively), with River Red Gum occurring in association with rushes and a variable component of rhizomatous to stoloniferous aquatic grasses and herbs. Rare, recorded from the western north-central and the lowland north-east parts of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Centipeda</i> spp.	Sneezeweed
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Epilobium</i> spp.	Willow Herb
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Juncus flavidus</i>	Gold Rush
<i>Juncus semisolidus</i>	Plains Rush
<i>Lachnagrostis filiformis</i> s.s.	Annual Blown-grass
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Myriophyllum</i> spp.	Water Milfoil
<i>Persicaria prostrata</i>	Creeping Knotweed
<i>Rumex tenax</i>	Narrow-leaf Dock

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium to tall rushes	2	5	
Medium to tall grasses	2	10	
Medium to small sedges	1	+	substantially modified if restricted to very few isolated plants
Small to medium herbs	6	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus camaldulensis</i>	10%

EVC A120: Riparian Fern Scrub

Description:

Dense tall shrubby vegetation with a primarily ferny ground-layer, associated with waterlogged and inundation-prone soils with a substantial organic content. Distinguished from Riparian Scrub (EVC 191) and Riparian Thicket (EVC 59) by greater height and more open and diverse ferny understorey. Distinguished from Swamp Scrub (EVC 53) by being dominated by Scented Paperbark as well as by understorey character. Localised in the Otway Ranges and probably also higher rainfall parts of the Gippsland Plain.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Blechnum minus</i>	Soft Water-fern	
<i>Blechnum nudum</i>	Fishbone Water-fern	
<i>Blechnum wattsii</i>	Hard Water-fern	
<i>Cyanogeton</i> spp.	Water Ribbons	
<i>Dicksonia antarctica</i>	Soft Tree-fern	
<i>Eucalyptus ovata</i> subsp. <i>ovata</i>	Swamp Gum	minor component if present
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	
<i>Gleichenia microphylla</i>	Scrambling Coral-fern	
<i>Gratiola peruviana</i>	Austral Brooklime	
<i>Histiopteris incisa</i>	Bat's Wing Fern	
<i>Hypolepis</i> spp.	Ground Fern	
<i>Isolepis inundata</i>	Swamp Club-sedge	
<i>Juncus</i> spp.	Rush	notably <i>J. gregiflorus</i> and <i>J. procerus</i>
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	
<i>Melaleuca squarrosa</i>	Scented Paperbark	usual dominant
<i>Myriophyllum pedunculatum</i>	Mat Water-milfoil	
<i>Pteris tremula</i>	Tender Brake	
<i>Tetrarrhena juncea</i>	Forest Wire-grass	
<i>Todea barbara</i>	Austral King-fern	
<i>Triglochin striata</i>	Arrow Grass	robust variants

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tall shrubs / small trees	1	40	substantially modified if restricted to very few isolated plants
Ferns	3	5	
Aquatic to semi-aquatic herbs	3	+	
Medium (to tall) sedges	1	2	

2. WEEDS**High threat weed species**

Scientific name	Common name
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Rubus fruticosus</i> spp. agg.	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall shrubs, Scented Paperbark <i>Melaleuca squarrosa</i> (and Woolly Tea-tree <i>Leptospermum lanigerum</i> if present)	80%

EVC 191: Riparian Scrub

Description:

Dense shrubby vegetation associated with waterlogged ground along poorly-defined drainage-lines, often in areas with sandy (or granite-derived) soils, in less fertile and more acidic but similarly wet sites to Swamp Scrub (EVC 53). Higher rainfall southern areas. *Leptospermum lanigerum* dominated variants on Mt Disappointment and in the Strathbogie Ranges, previously referred to Riparian Scrub, are now considered better referred to Riparian Thicket (EVC 59).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	
<i>Gleichenia microphylla</i>	Scrambling Coral-fern	
<i>Lepidosperma elatius</i>	Tall Sword-sedge	
<i>Machaerina gunnii</i>	Slender Twig-sedge	
<i>Machaerina tetragona</i>	Square Twig-sedge	
<i>Melaleuca squarrosa</i>	Scented Paperbark	usual dominant

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Tall scrambling plants can be represented as either ferns or monocots. Small herbs may be present, particularly as post-fire ephemerals.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) shrubs	1	25	
Tall scramblers (ferns or monocots)	2	5	
Medium (to small) herbs	3	1	particularly as post-fire ephemerals
Medium (to tall) sedges	3	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Rubus anglocandicans</i>	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) shrubs, Tea-tree <i>Leptospermum</i> spp. and/or Paperbark <i>Melaleuca</i> spp.	50%

EVC 59: Riparian Thicket

Description:

Closed scrub with a component of ferns and large sedges, occurring along swampy drainage lines with acidic soils, at altitudes intermediate between the habitats of Riparian Scrub (EVC 191) and Montane Riparian Thicket (EVC 41) (c. 450–700 m). Very localised on ranges mostly north of the Divide (e.g. Mt Disappointment, Murrindindi, Dandenongs and Strathbogies).

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Agrostis</i> spp. agg. aff. <i>hiemalis</i>	Forest Bent
<i>Blechnum nudum</i>	Fishbone Water-fern
<i>Blechnum wattsii</i>	Hard Water-fern
<i>Carex</i> spp.	Sedge
<i>Coprosma quadrifida</i>	Prickly Currant-bush
<i>Gleichenia microphylla</i>	Scrambling Coral-fern
<i>Gratiola pubescens</i>	Glandular Brooklime
<i>Leptospermum lanigerum</i>	Woolly Tea-tree
<i>Mentha laxiflora</i>	Forest Mint
<i>Tetrarrhena juncea</i>	Forest Wire-grass
<i>Veronica calycina</i>	Hairy Speedwell

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tall shrubs/small trees	1	35	
Medium shrubs	2	2	
Ferns	3	5	
Medium to large sedges	1	+	substantially modified if restricted to very few isolated plants
Small to medium herbs	3	2	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Hedera helix</i>	English Ivy
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Rubus fruticosus</i> spp. agg.	Blackberry
<i>Salix cinerea</i>	Grey Sallow

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where respective zones present, score each life-form independently within its zone of dominance to co-dominance and average the values obtained

Structural dominant	Benchmark cover
<i>Leptospermum</i> spp.	70%

EVC 103: Riverine Chenopod Woodland

Description:

Eucalypt dominated woodland of the most elevated of the flood-prone riverine terraces, relatively intact examples with a diverse shrubby-grassy understorey which can be rich in annual species. Prior to river regulation, at least a portion of the habitat was prone to irregular shallow flooding, and comprised intermittent or episodic wetland. Floodplains of the north-west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Brachyscome</i> spp.	Daisy
<i>Calocephalus sonderi</i>	Pale Beauty-heads
<i>Chenopodium nitrariaceum</i>	Nitre Goosefoot
<i>Duma florulenta</i>	Tangled Lignum
<i>Eremophila</i> spp.	Emu Bush
<i>Eucalyptus largiflorens</i>	Black Box
<i>Exocarpos aphyllus</i>	Leafless Ballart
<i>Goodenia</i> spp.	Goodenia
<i>Lepidium</i> spp.	Peppercress
<i>Pittosporum angustifolium</i>	Weeping Pittosporum
<i>Rytidosperma setaceum</i>	Bristly Wallaby-grass

Notes on indicator species

As well as indicator species, there is a general diversity of annual herbs.

Conditions when the EVC should not be assessed

None recognised other than rare instances when habitat is subject to inundation. Vegetation may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Vegetation may be underscored during prolonged dry periods.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if living mature trees of at least medium size (>30 cm DBH) infrequent to absent
Medium shrubs	4	5	e.g. emu bushes, Tangled Lignum, saltbushes
Medium (to small) perennial graminoids	3	5	
Small (to medium) annual herbs	5	+	substantially modified if restricted to very few isolated plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Asparagus asparagoides</i>	Bridal Creeper
<i>Asphodelus fistulosus</i>	Onion Weed
<i>Bromus rubens</i>	Red Brome
<i>Carpobrotus aequilaterus</i>	Angled Pigface
<i>Carrichtera annua</i>	Ward's Weed
<i>Gazania linearis</i>	Gazania
<i>Limonium</i> spp.	Sea Lavender
<i>Lycium ferocissimum</i>	African Box-thorn
<i>Marrubium vulgare</i>	Horehound
<i>Mesembryanthemum</i> spp.	Ice Plant
<i>Olea europaea</i>	Olive
<i>Opuntia</i> spp.	Prickly Pear
<i>Oxalis pes-caprae</i>	Soursob
<i>Sisymbrium</i> spp.	Mustard
<i>Vulpia bromoides</i>	Squirrel-tail Fescue

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Trees, Black Box <i>Eucalyptus largiflorens</i>	10%

EVC A128: Riverine Claypan Herbland

Description:

Vegetation dominated by ephemeral and annual forbs, especially small daisies, occurring in shallow, seasonally-inundated claypan depressions. At Barmah Forest and Ulupna Island it typically occurs in localised treeless patches amongst Riverine Swampy Woodland (EVC 815) and can abut the lower margins of slightly more elevated areas supporting the terrestrial EVCs Plains Woodland or Shallow Sands Woodland. Some of these patches occur within the mapping unit Riverine Grassland (EVC 1088). The associated vegetation in the lower rainfall Mallee locations is less well documented, but includes drier vegetation communities, including Semi-arid Woodland and presumably also Alluvial Plains Semi-arid Shrubland (EVC A123) and possibly Lignum Swampy Woodland (EVC 823). While having some similarity to Claypan Ephemeral Wetland (EVC 284) from the vicinity of the Grampians, EVC 284 differs from EVC A128 in characteristics including the prevalence of ephemeral monocots (notably species of *Centrolepis* and *Aphelia*) and in occurring on cracking silty clays within the EVC Alluvial Terraces Herb-rich Woodland. Riverine Claypan Herbland is typically inundated by local run-off of winter rainfall rather than by overbank flooding. This EVC is currently confirmed only from the mid-Murray (Barmah Forest and Ulupna Island) and Mallee (Lake Powell – Lake Carpul area, with additional poorly known variants occurring in interdune swales at Hattah, Murray-Sunset and Wyperfeld tentatively included in this EVC). This EVC is confined to small localised patches and is of extremely limited total extent.

Indicator species (some or all of these species should be present)

Scientific name	Common name
Mid Murray (Barmah Forest – Ulupna Island):	
<i>Brachyscome muelleroides</i>	Mueller Daisy
<i>Brachyscome readeri</i>	Reader's Daisy
<i>Crassula colorata</i>	Dense Crassula
<i>Crassula decumbens</i> var. <i>decumbens</i>	Spreading Crassula
<i>Crassula peduncularis</i>	Purple Crassula
<i>Eleocharis pusilla</i>	Small Spike-sedge
<i>Glossostigma cleistanthum</i>	Small-flower Mud-mat
<i>Goodenia gracilis</i>	Slender Goodenia
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Lobelia concolor</i>	Poison Pratia
<i>Myriocephalus rhizocephalus</i>	Woolly-heads
<i>Myriophyllum glomeratum</i>	Clustered Water-milfoil
<i>Plagiobothrys elachanthus</i>	Hairy Forget-me-not
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass
<i>Wurmbea dioica</i>	Common Early Nancy
Mallee:	
<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
<i>Brachyscome lineariloba</i>	Hard-head Daisy
<i>Crassula decumbens</i> var. <i>decumbens</i>	Spreading Crassula
<i>Glossostigma cleistanthum</i>	Small Flowered Mud-mat
<i>Glossostigma drummondii</i>	Desert Mud-mat
<i>Hyalosperma glutinosum</i> subsp. <i>glutinosum</i>	Golden Sunray

<i>Lepidium monophloeoides</i>	Winged Peppergrass
<i>Limosella curdieana</i>	Large Mudwort
<i>Myriocephalus rhizocephalus</i>	Woolly-heads
<i>Myosurus australis</i>	Mousetail
<i>Pilularia novae-hollandiae</i>	Austral Pillwort
<i>Pogonolepis muelleriana</i>	Stiff Cup-flower
<i>Ranunculus pentandrus</i> var. <i>platycarpus</i>	Inland Buttercup
<i>Spergularia brevifolia</i>	Salt Sea-spurrey
<i>Triglochin nana</i>	Dwarf Arrowgrass
<i>Triptilodiscus pygmaeus</i>	Common Sunray

Conditions when the EVC should not be assessed

A range of the component ephemeral species will only be evident during early to mid-spring, and may not express during unfavourable seasons. Assessments outside these conditions may be unreliable.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

When approaching conditions when the EVC should not be assessed. Also note difference between the required life-form groups for the two general localities in which this EVC occurs.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium grasses	1	1	central Murray and Mallee
Small to medium sedges	1	5	central Murray
Medium perennial herbs	2	2	central Murray
Small (to tiny) herbs	8	20	mainly ephemerals. Central Murray and Mallee.

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus</i> spp.	Fox Tail
<i>Arctotheca calendula</i>	Cape Weed
<i>Cotula bipinnata</i>	Ferny Cotula
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Score each lifeform separately and average.

Structural dominant	Benchmark cover
Small to tiny herbs	40%

EVC 975: Riverine Ephemeral Wetland

Description:

Herbland of the floor of riverine depressions, on relatively free-draining sandy soils, with a mixture of species from less inundation-prone riverine forest/woodland and species of shallow ephemeral wetland. Rare, recorded from Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acaena novae-zelandiae</i>	Bidgee-widgee	Structurally dominant species
<i>Eucalyptus camaldulensis</i>	River Red-gum	Scattered or overhanging
<i>Geranium</i> spp.	Crane's Bill	Structurally dominant species
<i>Isolepis fluitans</i>	Floating Club-sedge	Structurally dominant species

Notes on indicator species

Primarily without woody species. Species diversity is relatively low.

Conditions when the EVC should not be assessed

None recognised other than during or recently following deeper inundation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) herbs	3	25	
Trees	1	+	substantially modified if >20% of mature trees are dead, including stumps, or regeneration thickets evident

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Rubus</i> spp.	Bramble
<i>Xanthium</i> spp.	Cocklebur

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small herbs	50%

EVC 814: Riverine Swamp Forest

Description:

Tall open eucalypt dominated forest (to woodland), to 30-40 m or more in height with a generally species-poor understorey dominated by obligate wetland species. Opportunistic annuals can become prevalent during sustained dry periods. Murray River floodplain, restricted outside of Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Amphibromus fluitans</i>	River Swamp Wallaby- grass
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eucalyptus camaldulensis</i>	River Red-gum
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass
Associated species	
<i>Cardamine moirensis</i>	Riverina Bitter-cress
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Cynogeton procerum</i> s.s.	Water Ribbons
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Ranunculus pumilio</i>	Ferny Small-flower Buttercup

Notes on indicator species

Eucalyptus camaldulensis, variously with *Pseudoraphis spinescens*, *Eleocharis acuta*, (locally) *Amphibromus fluitans*, or sometimes bare (leaf-litter/mud). Where present, associated species variously include those indicated above. On localised areas of flood-prone sandy terraces, connected to the river or major floodway creeks, *Eragrostis* spp. and *Cynodon dactylon* var. *pulchellus* can be locally dominant. This vegetation is transitional to Intermittent Swampy Woodland and was treated as a variant of the latter along the lower Murray.

Conditions when the EVC should not be assessed

None recognised but may be impossible to access and sample during floods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note areas of sparse vegetation are naturally associated with blackwater ponds or dense litter.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	15	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium aquatic to semi-aquatic herbs	1	+	Substantially modified if restricted to very few isolated plants
Grasses and non-tufted sedges	1	20	grasses are floating or turf-forming species

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Paspalum dilatatum</i>	Paspalum
<i>Paspalum distichum</i>	Water Couch
<i>Phyla canescens</i>	Fog-fruit

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
	2-5%	Minor
Mass regeneration of River Red-gum <i>Eucalyptus camaldulensis</i>	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised - areas of sparse vegetation are naturally associated with blackwater ponds or dense litter. See also Floodway Pond Herbland/Riverine Swamp Forest complex (EVC 945).

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	30%

EVC 815: Riverine Swampy Woodland

Description:

Eucalypt dominated woodland to open woodland, ground-layer grassy to sedgy to herbaceous, with species indicative of periodic waterlogging (and with floristic affinities to Plains Grassy Wetland [EVC 125]). Depleted and rare, Riverina plains and floodplains, most extensive at Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
Riverina Plains and Riverine Floodplain		
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	Riverina Plains – sparse in wetter central areas Riverine Floodplain - sometimes with <i>E. largiflorens</i>
<i>Lobelia concolor</i>	Poison Pratia	
<i>Marsilea</i> spp.	Nardoo	
<i>Poa fordeana</i>	Forde Poa	
<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass	
Riverine Floodplain		
<i>Brachyscome paludicola</i>	Woodland Swamp-daisy	
<i>Calotis</i> spp.	Burr Daisy	
<i>Carex tereticaulis</i>	Poong'ort	sparse tussocks can be present
<i>Eleocharis pusilla</i>	Small Spike-sedge	
<i>Goodenia</i> spp.	Goodenia	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	sparse tussocks can be present
<i>Wahlenbergia fluminalis</i>	River Bluebell	
Riverina Plains		
<i>Alternanthera denticulata</i> s.l.	Lesser Joyweed	
<i>Asperula conferta</i>	Common Woodruff	
<i>Calotis scapigera</i>	Tufted Burr-daisy	
<i>Eucalyptus microcarpa</i>	Grey Box	or sparse <i>E. camaldulensis</i> in wetter central areas
<i>Haloragis aspera</i>	Rough Raspwort	
<i>Isolepis</i> spp.	Club Sedge	
<i>Isotoma fluviatilis</i> subsp. <i>australis</i>	Swamp Isotome	
<i>Juncus</i> spp.	Rush	<i>J. flavidus</i> , <i>J. amabilis</i> , <i>J. subsecundus</i> , <i>J. pallidus</i>
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Lythrum hyssopifolia</i>	Small Loosestrife	
<i>Pycnosorus globosus</i>	Drumsticks	
<i>Rumex</i> spp.	Dock	
<i>Swainsona procumbens</i>	Broughton Pea	
<i>Walwhalleya proluta</i>	Rigid Panic	

Conditions when the EVC should not be assessed

None recognised. However, it should be noted that vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Note vegetation may be underscored during prolonged dry periods

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	also substantially modified if living mature trees of at least medium size (>40 cm DBH) infrequent to absent or dense regeneration thickets evident
Medium (to small) herbs	3	5	especially semi-aquatic species
Small (to medium) non-tufted sedges	2	5	
Medium (to tall) tufted sedges/rushes	1	+	substantially modified if restricted to very few isolated plants
Medium (to tall) tufted grasses	3	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i> , Grey Box <i>Eucalyptus microcarpa</i> and/or Black Box <i>Eucalyptus Largiflorens</i>	20%

EVC 804: Rushy Riverine Swamp Aggregate

Description:

Aggregate EVC describing the various zones of vegetation associated with semi-permanent wetlands with turf/aquatic grass species co-dominating in mosaic or association with components of tall rushland and aquatic herbs. Concentrically zoned wetland with lawn-like grassy centres during drier periods or as a patchy structural mosaic. Various including species-poor components of Tall Marsh (EVC 821), Floodplain Grassy Wetland (EVC 809), Aquatic Sedgeland (EVC 308), Aquatic Herbland (EVC 653) and Dwarf Floating Aquatic Herbland (EVC 949). Scattered and restricted, floodplains in less arid parts of the Riverina, upstream from Gunbower Island.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	dominated by this species and/or <i>Pseudoraphis spinescens</i>
<i>Eucalyptus camaldulensis</i>	River Red-gum	present around the verges
<i>Juncus ingens</i>	Giant Rush	rings swamp or may be in mosaic with dominants
<i>Myriophyllum</i> spp.	Water-milfoil	occurs with dominants - mostly <i>M. variifolium</i> or <i>M. crispatum</i>
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	dominated by this species and/or <i>Amphibromus fluitans</i>
<i>Stellaria angustifolia</i> subsp. <i>tenella</i>	Matted Starwort	occurs with dominants
Additional aquatic species which can be present		
<i>Azolla filiculoides</i>	Pacific Azolla	
<i>Eleocharis sphacelata</i>	Tall Spike-sedge	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	Clove-strip	
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed	
<i>Ricciocarpos natans</i>	Fringed Heartwort	
<i>Spirodela punctata</i>	Thin Duckweed	
<i>Vallisneria australis</i>	Eel Grass	

Conditions when the EVC should not be assessed

None recognised, subject to accessibility of all relevant strata following inundation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Aquatic or mat-forming grasses and sedges	3	20	
Aquatic herbs	3	+	substantially modified if restricted to very few plants
Tall rushes	1	+	substantially modified if restricted to very few plants

+ denotes presence

2. WEEDS**High threat weed species**

Scientific name	Common name
<i>Paspalum distichum</i>	Water Couch
<i>Sagittaria</i> spp.	Sagittaria

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess separately and average scores.

Structural dominant	Benchmark cover
Aquatic grasses	40%
Aquatic herbs	Assess for scoring category of >50% benchmark cover
Giant Rush <i>Juncus ingens</i>	Assess for scoring category of >50% benchmark cover

EVC 842: Saline Aquatic Meadow

Description:

Submerged herbland of thin grass-like plants, occurring within brackish to hyper-saline waterbodies (shallow lakes and swamps and intermittent wetland ponds). The vascular vegetation is characteristically extremely species-poor, comprising one or more species of *Althenia* or *Ruppia*. The non-vascular stoneworts (*Lamprothamnium* spp.) can also be conspicuous and are ecologically important. Widespread in lowlands (within restricted habitat), principally in the Wimmera, western volcanics and coastal areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Althenia</i> spp.	Water Mat	e.g. <i>A. preissii</i> , <i>A. bilocularis</i> , <i>A. cylindrocarpa</i>
<i>Characeae</i> spp.	Stonewort	
<i>Ruppia maritima</i> s.s.	Water Tassel	confined to north-west of the State
<i>Ruppia megacarpa</i>	Large-fruit Tassel	
<i>Ruppia polycarpa</i>	Many-fruit Tassel	

Conditions when the EVC should not be assessed

Long-dry conditions where at least debris of aquatic vegetation is no longer clearly evident.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Note conditions when the EVC should not be assessed.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Aquatic herbs	1	5	thin, grass-like species

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Note conditions when the EVC should not be assessed. Ignore dieback due to natural drying cycles.

Structural dominant	Benchmark cover
Fine-leaved aquatic herbs: Tassel <i>Ruppia</i> spp., Water Mat <i>Althenia</i> spp.	Assess for scoring category of >50% benchmark cover

EVC 717: Saline Lake Aggregate

Description:

Collective label for the various zones of vegetation associated with the floors and verges of saline waterbodies. Components of the aggregate variously include Saline Aquatic Meadow (EVC 842), Plains Saltmarsh Aggregate (EVC 888), Brackish Herbland (EVC 538), Brackish Sedgeland (EVC 13) and, on drier verges, Brackish Grassland (EVC 934) and Brackish Shrubland (EVC 973). Mainly western and northern areas, but also scattered sites on coastal plains.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs.

Conditions when the EVC should not be assessed

See descriptions of component EVCs.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

See component EVCs.

General comments on assessing critical lifeform groups

See component EVCs. As each EVC represents a biodiversity unit, if an overall score is required, use average from set of EVC scores (regardless of relative extent of EVCs).

2. WEEDS

See component EVCs.

3. INDICATORS OF ALTERED PROCESSES

See component EVCs.

4. VEGETATION STRUCTURE AND HEALTH

See component EVCs.

EVC 648: Saline Lake-verge Aggregate

Description:

Collective label for the various zones of vegetation associated with the verges of saline waterbodies. Potential components of the saline lake aggregate variously include Saline Aquatic Meadow (EVC 842), Plains Saltmarsh Aggregate (EVC 888), Brackish Herbland (EVC 538), Brackish Sedgeland (EVC 13), Brackish Wetland Aggregate (EVC 656) and, on drier verges, Brackish Grassland (EVC 934) and Brackish Shrubland (EVC 973). Mainly western and northern areas, but also scattered sites on coastal plains.

Indicator species (some or all of these species should be present)

See descriptions of component EVCs.

Conditions when the EVC should not be assessed

See component EVCs

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

See component EVCs.

General comments on assessing critical lifeform groups

See component EVCs. As each EVC represents a biodiversity unit, if an overall score is required, use average from set of EVC scores (regardless of relative extent of EVCs).

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

See component EVCs.

2. WEEDS

None recognised

3. INDICATORS OF ALTERED PROCESSES

See component EVCs.

4. VEGETATION STRUCTURE AND HEALTH

See component EVCs.

EVC A113: Saltmarsh-grass Swamp

Description:

Inundation-prone grassland of highly saline sites, dominated by Saltmarsh Grass. Shallow intermittent saline lakes in parts of inland western Victoria, also extremely restricted occurrences in the Barwon River estuary and on wet saline flats in the Kerang area.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Puccinellia perlaxa</i>	Plains Saltmarsh Grass
<i>Puccinellia stricta</i> s.s.	Australian Saltmarsh Grass
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
<i>Senecio halophilus</i>	Salt Groundsel
<i>Suaeda australis</i>	Austral Seablite
<i>Tecticornia pergranulata</i>	Blackseed Glasswort
<i>Wilsonia humilis</i>	Silky Wilsonia
<i>Wilsonia rotundifolia</i>	Round-leaf Watsonia

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium tufted grasses	1	25
Small to medium herbs	1	1

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Puccinellia</i> spp.	40%

EVC 676: Salt Paperbark Woodland

Description:

Melaleuca dominated woodland with halophytic understorey, occurring on seasonally waterlogged heavy clay soils on saline flats and lake verges of inland semi-arid areas. Restricted, drier northern and western areas of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Tecticornia</i> spp.	Glasswort
<i>Melaleuca halmaturorum</i>	Salt Paperbark
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
Examples of halophytic herbs occurring with above dominant species	
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Thyridia repens</i>	Creeping Monkey-flower
<i>Triglochin striata</i>	Streaked Arrowgrass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small trees	1	10	
Succulent herbs or shrubs	2	5	jointed-stem herbs, to semi-shrubs (samphires and glassworts)
Medium (to small) herbs	3	5	fleshy-leaved
Medium grasses	1	+	substantially modified if restricted to very few plants.

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Brassica tournefortii</i>	Mediterranean Turnip
<i>Bromus rubens</i>	Red Brome
<i>Carrichtera annua</i>	Ward's Weed
<i>Hordeum</i> spp.	Barley Grass
<i>Parapholis incurva</i>	Coast Barb-grass
<i>Vulpia bromoides</i>	Squirrel-tail Fescue

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Note potential for mosaics with other EVCs, use average scores within mosaics.

Structural dominant	Benchmark cover
Salt Paperbark <i>Melaleuca halmaturorum</i>	20%

EVC 101: Samphire Shrubland

Description:

Low halophytic shrubland of drier inland areas, dominated by succulent-stemmed chenopods (samphires). Lower rainfall western and northern areas of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Frankenia</i> spp.	Sea Heath
<i>Tecticornia</i> spp.	Glasswort

On outer verges and mounds

<i>Brachyscome lineariloba</i>	Hard-head Daisy
<i>Crassula sieberiana</i> s.l.	Sieber Crassula
<i>Hornungia procumbens</i>	Oval Purse
<i>Senecio glossanthus</i> s.l.	Slender Groundsel
<i>Triglochin</i> spp.	Arrowgrass

Notes on indicator species

Diverse with a range of small annual herbs on outer verges and mounds.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, however annual herbs may not be evident between summer and autumn.

General comments on assessing critical lifeform groups

Where Samphire Shrubland is adventive, assess as for presumed prior EVC.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Succulent shrubby chenopods	1	10	glassworts
Annual herbs	2	+	on hummocks or towards outer verges
Perennial herbs	2	+	towards outer verges

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Brassica tournefortii</i>	Mediterranean Turnip
<i>Bromus rubens</i>	Red Brome
<i>Carrichtera annua</i>	Ward's Weed
<i>Hordeum</i> spp.	Barley Grass
<i>Parapholis incurva</i>	Coast Barb-grass
<i>Vulpia bromoides</i>	Squirrel-tail Fescue

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised. Where samphire shrubland is adventive, assess as for prior EVC.

4. VEGETATION STRUCTURE AND HEALTH

Note potential for other EVCs or unvegetated zones to be present.

Structural dominant	Benchmark cover
Shrubby succulent chenopods (Glassworts) <i>Tecticornia</i> spp.	20%

EVC A124: Sandy Stream Pond Aggregate

Description:

Sandy Stream Pond Aggregate occupies chain of ponds habitats along intermittent floodways through sandy terrain. Individual ponds supporting this aggregate EVC can include representation of indicator species from a wide range of component Wetland EVCs, often on a very fine scale of pattern. The relevant component EVCs variously include Aquatic Grassy Wetland (EVC 306), Aquatic Herbland (EVC 653), Aquatic Sedgeland (EVC 308), Dwarf Floating Aquatic Herbland (EVC 949), Floodway Pond Herbland (EVC 810), Submerged Aquatic Herbland (EVC 918), Sweet Grass Wetland (EVC 920), Tall Marsh (EVC 821), Wet Verge Herbland (EVC A118), Wet Verge Herbland/Floodway Pond Herbland Complex (EVC A125), Wet Verge Sedgeland (EVC 932) and Wet Verge Sedgeland/Sedge Wetland Complex (EVC A126). Wet Verge Herbland is usually a conspicuous component. Sandy Stream Pond Aggregate is known with certainty only from the Providence Ponds - Perry River and adjacent catchments in Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Callitriche sonderi</i>	Matted Water-starwort
<i>Carex appressa</i>	Tall Sedge
<i>Carex gaudichaudiana</i>	Fen Sedge
<i>Centella cordifolia</i>	Centella
<i>Cycnogeton microtuberosum</i>	Eastern Water-ribbons
<i>Cyperus gunnii</i> subsp. <i>gunnii</i>	Flecked Flat-sedge
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Glyceria australis</i>	Australian Sweet-grass
<i>Gratiola pedunculata</i>	Stalked Brooklime
<i>Gratiola peruviana</i>	Austral Brooklime
<i>Hydrocotyle sibthorpioides</i>	Shiny Pennywort
<i>Hypericum japonicum</i>	Matted St John's Wort
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Juncus bufonius</i>	Toad Rush
<i>Juncus planifolius</i>	Broad-leaf Rush
<i>Juncus procerus</i>	Tall Rush
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Laphangium luteoalbum</i>	Jersey Cudweed
<i>Lythrum hyssopifolia</i>	Small Loosestrife
<i>Montia australasica</i>	White Purslane
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
<i>Persicaria hydropiper</i>	Water Pepper
<i>Persicaria prostrata</i>	Creeping Knotweed
<i>Phragmites australis</i>	Common Reed
<i>Potamogeton australiensis</i>	Thin Pondweed
<i>Potamogeton cheesemanii</i>	Red Pondweed

Note on indicator species

Sandy Stream Pond Aggregate can variously include components referable to a wide range of EVCs, typically at a very fine-scale. A much wider range of species than listed above have been recorded from the relevant habitat: See descriptions of the component EVCs.

Conditions when the EVC should not be assessed

None recognised (subject to water quality adequate to view attached vegetation in wetland shallows).

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

Some lifeforms will not be evident during extremely dry conditions.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) sedges	1	20	within relevant zone on outer fringe, not true aquatics
Small (to medium) herbs	8	30	within drawdown zone, potentially amphibious but not obligate aquatic species
Aquatic herbs and/or sedges	2	2	within drawdown zone
Small (to medium) sedges or rushes	2	2	within drawdown zone
Medium grasses	1	2	within drawdown zone

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche stagnalis</i>	Common Water-starwort
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Erigeron bonariense</i>	Flaxleaf Fleabane
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Ludwigia palustris</i>	Marsh Ludwigia
<i>Paspalum distichum</i>	Water Couch
<i>Rubus</i> spp.	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised, other than changes due to erosion or deposition (principally of sand slugs) - evaluate according to extent of change in wetland characteristics and vegetation zonation.

4. VEGETATION STRUCTURE AND HEALTH

Score zones separately and average the scores.

Structural dominant	Benchmark cover
Outer verge:	
Medium (to tall) sedges, species of either <i>Carex</i> or <i>Cyperus</i>	40%
Drawdown slope:	
Small to medium herbs and graminoids	60%

EVC 845: Sea-grass Meadow

Description:

Sward-forming aquatic herbland of sheltered marine shallows, intertidal flats and lower estuarine habitats. Scattered along Victorian coast, with most extensive development within Corner Inlet and Western Port.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Althenia marina</i>	Sea Water-mat	Localised on intertidal mud-flats of western Port Phillip Bay
<i>Heterozostera</i> spp.	Grass-wrack	
<i>Ruppia tuberosa</i>	Tuberous Tassel	Localised on intertidal mud-flats of western Port Phillip Bay
<i>Zostera muelleri</i>	Dwarf Grass-wrack	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Effective cover varies according to inundation – cover assessment is based on projection from when foliage is submerged and supported in an upright position.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Non-tufted graminoids (sea-grasses)	1	5	frequently much higher

2. WEEDS

High threat weed species

Scientific name	Common name	Comments
<i>Spartina</i> spp.	Spartina	on coastal margins

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised (impacts of turbidity/siltation assessed via structure and health).

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Non-tufted graminoids (mainly <i>Zostera</i> spp. or <i>Heterozostera</i> spp.)	10%

EVC 195: Seasonally Inundated Shrubby Woodland

Description:

Woodland of broad drainage lines and poorly-drained flats (e.g. recent Quaternary swamp deposits, seasonally-waterlogged depressions between dunes), in habitat that is occasionally inundated, or at least waterlogged, for extensive periods over winter. The EVC is characteristically rich in geophytes, sedges and annual herbs, usually with a conspicuous shrubby component. Principally in south-west, but extending into north-central areas of the State and central Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Callistemon</i> spp.	Bottlebrush	notably <i>C. rugulosus</i> ; <i>C. citrinus</i> in Gippsland
<i>Eucalyptus</i> spp.	Eucalypt	notably <i>E. camaldulensis</i> , also <i>E. leucoxylon</i> and <i>E. melliodora</i> ; <i>E. ovata</i> subsp. <i>ovata</i> and <i>E. tereticornis</i> subsp. <i>mediana</i> in Gippsland
<i>Melaleuca</i> spp.	Honey-myrtle	in wetter sites (notably <i>M. decussata</i> and <i>M. gibbosa</i> ; <i>M. parvistaminea</i> in Gippsland)

Notes on indicator species

Melaleuca brevifolia shrubland/heath in brackish areas is referred to Brackish Shrubland (EVC 973).

Conditions when the EVC should not be assessed

None recognised. Vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	7	typically gum-barked
Small (to medium) shrubs	4	10	
Small (to medium) herbs	3	5	damp-site species to semi-aquatics
Medium (to small) tufted grasses	2	5	
Medium (to small) sedges and/or restiads	3	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus bulbosus</i>	Bulbous Rush

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Trees, <i>Eucalyptus</i> spp. - <i>E. camaldulensis</i> , <i>E. leucoxylon</i> and/or <i>E. melliodora</i> in western and north-central Victoria; <i>E. ovata</i> subsp. <i>ovata</i> and/or <i>E. tereticornis</i> subsp. <i>mediana</i> in Gippsland	15%

EVC 196: Seasonally Inundated Sub-saline Herbland

Description:

Very species-poor low herbland of seasonal saline wetland within relicts of former tidal lagoons, dominated by *Wilsonia* spp. The habitat is not inundated tidally, but by overland flows. Extremely localised (mostly Bellarine Peninsula, small areas in the Gippsland Lakes).

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Wilsonia backhousei</i>	Narrow-leaf <i>Wilsonia</i>
<i>Wilsonia humilis</i>	Silky <i>Wilsonia</i>
<i>Wilsonia rotundifolia</i>	Round-leaf <i>Wilsonia</i>

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

During and immediately after sustained inundation, may also be underscored during winter.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to medium) herbs	1	10

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small herbs, <i>Wilsonia</i> spp.	20%

EVC 136: Sedge Wetland

Description:

Seasonally-inundated, freshwater sedgeland of depressions, typically within swales amidst soils with a substantial sandy component, clearly dominated by tall sedges (rarely to medium height), lacking the diversity of broad-leaved herbs associated with relatively intact Plains Sedgy Wetland (EVC 647), and occurring within relatively less-fertile land-types than the latter. Widespread in southern and higher rainfall western areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Goodenia humilis</i>	Swamp Goodenia	
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	
<i>Machaerina arthropphylla</i>	Fine Twig-sedge	
<i>Machaerina juncea</i>	Bare Twig-sedge	
<i>Patersonia</i> spp.	Purple Flag	
<i>Schoenus</i> spp.	Bog Sedge	variously <i>S. tesquorum</i> , <i>S. apogon</i> , <i>S. brevifolius</i>

Notes on indicator species

Diversity is highly variable.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium to tall aquatic herbs	3	1	and/or small to medium semi-aquatic herbs
Medium to tall non-tufted sedges	1	15	dense and low-diversity
Medium to tall tufted sedges or grasses	2	5	as part of a lower strata

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche brutia</i>	Thread Water-starwort
<i>Cotula coronopifolia</i>	Water Buttons
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Trifolium repens</i> var. <i>repens</i>	White clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Ignore seasonal accumulations of dead foliage amongst live growth.

Structural dominant	Benchmark cover
Medium to tall sedges (Pithy Sword-sedge <i>Lepidosperma longitudinale</i> , Fine Twig-sedge <i>Machaerina arthropylla</i>)	30%

EVC A102: Sedge Wetland/Aquatic Herbland Complex

Description:

Open sedgeland occurring in association with a well developed component of aquatic herbs. Apparently restricted distribution on the west side of the Grampians, also Gippsland (Providence Ponds).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eucalyptus camaldulensis</i>	River Red-gum	Fringing
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	
<i>Machaerina arthropylla</i>	Fine Twig-sedge	
<i>Myriophyllum integrifolium</i>	Tiny Water-milfoil	
<i>Ornduffia</i> spp.	Marsh Flower	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall sedges	2	20
Aquatic herbs	2	20

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Aponogeton distachyos</i>	Cape Pond-lily
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Typha latifolia</i>	Lesser Reed-mace

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Colonisation by <i>Eucalyptus</i> spp. (<i>E. camaldulensis</i> or <i>E. tereticornis</i> subsp. <i>mediana</i>) or Burreed (<i>Kunzea</i> spp.)	<1%	Minor
	1-5%	Moderate
	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall sedges	40%

EVC 963: Sedge Wetland/Aquatic Sedgeland Complex

Description:

Tall sedgeland, with a component of septate, hollow-leaved sedges and aquatic herbs. Outer fringes are typically richer, with species characteristic of Sedge Wetland (EVC 136). Restricted, principally in the south-west of the State but with disjunct outliers further east (e.g. Dereel, Brisbane Ranges).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Chorizandra australis</i>	Southern Bristle-sedge	or possibly on occasion <i>Chorizandra cymbaria</i> s.s.
<i>Cychnogeton</i> spp.	Water Ribbons	
<i>Isolepis fluitans</i>	Floating Club-sedge	
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	
<i>Machaerina arthropophylla</i>	Fine Twig-sedge	
<i>Machaerina articulata</i>	Jointed Twig-sedge	
<i>Myriophyllum</i> spp.	Water-milfoil	<i>M. crispatum</i> and <i>M. simulans</i>
<i>Ornduffia reniformis</i>	Running Marsh-flower	

Notes on indicator species

The outer drier verges are much more species-rich - see Sedge Wetland (EVC 136).

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but note EVC may include areas of Aquatic Herbland (EVC 653). Treat these as part of the complex unless they constitute a discrete and clearly defined zone. The aquatic herb component may not be apparent if the wetland has been dry for a prolonged period.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Assessments of the lifeforms are to be made within the zones covered by the comments.

Critical lifeform	No. spp.	% Cover	Comments
Small (to medium) semi-aquatic herbs	3	5	damp sites but within dryer outer zone
Medium (to tall) aquatic herbs	3	10	within wetter zones
Medium (to tall) tufted grasses and sedges	2	5	within drier outer zones
Tall aquatic to semi-aquatic sedges	3	10	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche stagnalis</i>	Common Starwort

<i>Cotula coronopifolia</i>	Water Buttons
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall sedges	20%

EVC 1113: Sedge Wetland/Brackish Herbland Complex

Description:

Sedgeland of near coastal depressions, with the structural dominant species of Sedge Wetland (EVC 136) occurring in association with a component of halophytic herbs. Very rare, recorded from sub-saline soils with a high organic content on the Mornington Peninsula, but potentially at least previously more widespread in coastal areas.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Centella cordifolia</i>	Centella
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Gahnia trifida</i>	Coast Saw-sedge
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Isolepis cernua</i>	Nodding Club-sedge
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Lobelia irrigua</i>	Salt Pratia
<i>Machaerina arthropylla</i>	Fine Twig-sedge
<i>Machaerina juncea</i>	Bare Twig-sedge
<i>Samolus repens</i>	Creeping Brookweed
<i>Schoenus nitens</i>	Shiny Bog-sedge

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) sedges	3	20
Small (to medium) graminoids	3	5
Small (to medium) herbs	3	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Festuca arundinacea</i>	Tall Fescue
<i>Plantago coronopus</i>	Buck's-horn Plantain

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium (to tall) sedges (<i>Lepidosperma longitudinale</i> / <i>Machaerina</i> spp.)	40%

EVC 883: Sedge Wetland/Calcareous Wet Herbland Complex

Description:

Open sward of sedge species characteristic of Sedge Wetland (EVC 136), in association with herbaceous species characteristic of wet calcareous habitats. Rare with variants from near-coastal Western Victoria and South Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
Western Victoria & South Gippsland	
<i>Hydrocotyle muscosa</i>	Mossy Pennywort
<i>Machaerina arthropophylla</i>	Fine Twig-sedge
South Gippsland	
<i>Carex appressa</i>	Tall Sedge
<i>Hydrocotyle pterocarpa</i>	Wing Pennywort
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Machaerina juncea</i>	Bare Twig-sedge
<i>Mentha diemenica</i> s.l.	Slender Mint
<i>Poa labillardierei</i>	Common Tussock-grass
Western Victoria	
<i>Centella cordifolia</i>	Centella
<i>Goodenia humilis</i>	Swamp Goodenia
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Schoenus tesquorum</i>	Soft Bog-sedge

Notes on indicator species

Indicator species of Western Victoria and South Gippsland variants (above) occur with a wide range of associated species at low frequencies on the more species-rich outer verges. In the South Gippsland variant, *Gahnia trifida* appears to have been greatly reduced by grazing following burning.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to medium) herbs	5	15
Medium (to tall) sedges	3	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alopecurus</i> spp.	Fox Tail
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Senecio vulgaris</i>	Ragwort
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		Cover	Scale of severity
<i>Melaleuca</i> spp. encroachment	Narrow invasion front apparent on wetland verge	<5%	Minor
	Invasion extending into wetland floor	5-10%	Moderate
	Dense cover over wetland floor	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess lifeforms separately and average scores.

Structural dominant	Benchmark cover
Medium (to tall) sedges	20%
Small (to medium) herbs	30%

EVC 281: Sedge-rich Wetland

Description:

Treeless (or nearly so) vegetation of small swamps on seasonal drainage-lines, characterized by a diversity of small sedges, the extent of bare earth and lack of shrubs. The habitat is prone to shallow seasonal inundation and extreme summer dryness. This EVC is typically species-rich, with many species seasonally apparent at very low frequencies. Restricted, south-western areas of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Chorizandra enodis</i>	Black Bristle-sedge
<i>Goodenia humilis</i>	Swamp Goodenia
<i>Gratiola pumilo</i>	Dwarf Brooklime
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Juncus bufonius</i>	Toad Rush
<i>Juncus holoschoenus</i>	Joint-leaf Rush
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis
<i>Montia australasica</i>	White Purslane
<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Schoenus latelaminatus</i>	Medusa Bog-sedge
<i>Schoenus tesquorum</i>	Soft Bog-sedge

Conditions when the EVC should not be assessed

None recognised, but discretion required during prolonged dry periods when herbaceous component may not be evident.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised, but discretion required during prolonged dry periods when herbaceous component may not be evident.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to small) aquatic to semi-aquatic herbs	3	5
Medium non-tufted sedges	1	5
Small (to medium) sedges and rushes	5	5

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Black Bristle-sedge <i>Chorizandra enodis</i>	10%

EVC 816: Sedgy Riverine Forest

Description:

Eucalypt dominated forest (to woodland) with the understorey dominated by larger sedges (to sedgy-herbaceous or sedgy-grassy), floristics with some affinities to Red Gum Swamp (EVC 292). Floodplains of less arid Riverina and Wimmera (absent from further north-west).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
Murray River Floodplain & Wimmera		
<i>Carex tereticaulis</i>	Poong'ort	
<i>Eucalyptus camaldulensis</i>	River Red-gum	
Murray River Floodplain		
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Bolboschoenus medianus</i>	Marsh Club-sedge	
<i>Brachyscome paludicola</i>	Woodland Swamp-daisy	
<i>Calotis</i> spp.	Burr Daisy	
<i>Craspedia paludicola</i>	Swamp Billy-buttons	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eleocharis pusilla</i>	Small Spike-sedge	on drier margins
<i>Juncus amabilis</i>	Hollow Rush	
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass	
<i>Lobelia concolor</i>	Poison Pratia	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	
<i>Phragmites australis</i>	Common Reed	
<i>Stellaria angustifolia</i> subsp. <i>angustifolia</i>	Swamp Starwort	
Wimmera		
<i>Calotis scapigera</i>	Tufted Burr-daisy	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Cycnogeton</i> spp.	Water Ribbons	
<i>Crassula helmsii</i>	Swamp Crassula	
<i>Cyperus</i> spp.	Flat Sedge	
<i>Isolepis</i> spp.	Club Sedge	
<i>Juncus</i> spp.	Rush	
<i>Myriophyllum</i> spp.	Water-milfoil	

Conditions when the EVC should not be assessed

None other than imposed by inundation. Vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

In closed vegetation (>70% cover), small life-forms only required to be present as more than very few isolated plants.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	15	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Medium (to small) herbs	2	+	substantially modified if <2 species and/or <10% cover within intertussock spaces (rather than overall cover)
Tall tufted sedges	1	15	
Medium (to small) non-tufted sedges	1	+	substantially modified if <20% cover within intertussock spaces (rather than overall cover)

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Erigeron</i> spp.	Fleabane
<i>Paspalum dilatatum</i>	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass

Conditions where weeds are considered to have a negligible impact

None Recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	30%

EVC 817: Sedgy Riverine Forest/Riverine Swamp Forest Complex

Description:

Eucalypt dominated forest (to woodland) with the understorey dominants of Riverine Swamp Forest (EVC 814) conspicuous in association or fine-scale mosaic with larger tussock or rhizomatous species characteristic of Sedgy Riverine Forest (EVC 816). Floodplains of less arid parts of the Riverina, but mainly within Barmah Forest.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Bolboschoenus medianus</i>	Marsh Club-sedge	
<i>Carex tereticaulis</i>	Poong'ort	
<i>Centipeda cunninghamii</i>	Common Sneezeweed	
<i>Eclipta platyglossa</i>	Yellow Twin-heads	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eucalyptus camaldulensis</i>	River Red-gum	
<i>Lobelia concolor</i>	Poison Pratia	
<i>Paspalidium jubiflorum</i>	Warrego Summer-grass	
<i>Persicaria</i> spp.	Knotweed	in particular <i>P. prostrata</i>
<i>Phragmites australis</i>	Common Reed	
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass	

Conditions when the EVC should not be assessed

None other than imposed by inundation. Vegetation condition may be underscored during prolonged dry periods.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	also substantially modified if living mature trees of at least medium size (>50 cm DBH) infrequent to absent or patches of dense regeneration evident
Medium (to small) aquatic to semi-aquatic herbs	1	+	Substantially modified if restricted to very few plants
Medium (to small) non-tussock grasses or sedges	1	15	aquatic or semi-aquatic species
Tall tufted sedges	1	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Panicum coloratum</i>	Coolah Grass
<i>Paspalum dilatatum</i>	Paspalum
<i>Paspalum distichum</i>	Water Couch
<i>Phyla canescens</i>	Fog-fruit

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
River Red-gum <i>Eucalyptus camaldulensis</i> regeneration thickets	2-5%	Minor
	5-10%	Moderate
	>10%	Severe
<i>Typha</i> spp. invasion	1-5%	Minor
	5-10%	Moderate
	>10%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
River Red-gum <i>Eucalyptus camaldulensis</i>	20%

EVC 707: Sedgy Swamp Woodland

Description:

Eucalypt dominated woodland with the ground layer typically dominated by *Lepidosperma longitudinale* (or rarely *Lepidosperma laeve*) with a range of herbs characteristic of seasonally wet sites. Occurs on seasonally wet flats of coastal plains, on Quaternary sandy soils over heavier sub-soils. Rare, south-west Victoria and Mornington Peninsula, possibly also central Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Centella cordifolia</i>	Centella	
<i>Eucalyptus ovata</i>	Swamp Gum	and possibly <i>Eucalyptus camaldulensis</i> and/or <i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>
<i>Goodenia humilis</i>	Swamp Goodenia	
<i>Gratiola pubescens</i>	Glandular Brooklime	
<i>Lepidosperma laeve</i>	Clustered Sword-sedge	rarely
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	
<i>Ornduffia reniformis</i>	Running Marsh-flower	

Conditions when the EVC should not be assessed

None recognised but some allowance may be required for seasonal conditions.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	also substantially modified if >20% mortality or dense regeneration evident
Medium shrubs	1	+	substantially modified if restricted to very few plants
Medium (to small) aquatic to semi-aquatic herbs	3	5	
Medium (to tall) sedges	1	15	
Medium grasses	2	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Festuca arundinacea</i>	Tall Fescue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Rubus</i> spp.	Bramble

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp. – Swamp Gum <i>E. ovata</i> , River Red-gum <i>E. camaldulensis</i> or Gippsland Red-gum <i>E. tereticornis</i> subsp. <i>mediana</i>	10%

EVC 964: Shell-beach Herbland

Description:

Turf grassland/herbland mounds within largely unvegetated areas, occurring on *Coxiella* shell deposits on saline lake verges, over grey clay soils. Rare, Lake Corangamite.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Convolvulus</i> spp.	Bindweed
<i>Cuscuta</i> spp.	Dodder
<i>Distichlis distichophylla</i>	Australian Salt-grass
<i>Geranium retrorsum</i> s.l.	Grassland Crane's-bill
<i>Wilsonia backhousei</i>	Narrow-leaf Wilsonia

Notes on indicator species

Species listed above occur with a range of introduced annuals and biennials.

Conditions when the EVC should not be assessed

None other than as imposed by inundation.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Non-tufted grasses	1	+	substantially modified if restricted to very few plants
Prostrate, twining herbs	2	+	substantially modified if restricted to very few plants
Small (to prostrate) succulent semi-shrubs	1	+	substantially modified if not present as at least scattered patches on mounds

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Hordeum</i> spp.	Barley Grass
<i>Parapholis</i> spp.	Barb Grass
<i>Vulpia</i> spp.	Fescue

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

To determine appropriate ‘percent of benchmark cover’ category, examine all mounds (vegetated and formerly vegetated) and assess the percent of mounds that have vegetative cover. To assess health, determine the percent of vegetation in good health on vegetated mounds.

Structural dominant	Benchmark cover
Prostrate herbs and semi-shrubs (e.g. Bindweed <i>Convolvulus</i> spp., Narrow-leaf <i>Wilsonia</i> <i>Wilsonia backhousei</i>)	not applicable

EVC 908: Sink-hole Wetland Aggregate

Description:

Collective label for the various zones of wetland vegetation associated with near-coastal sink-holes in limestone. The central 'sink-hole' portions of the relevant wetlands are species-poor, with mats of aquatics. This inner zone is fringed by a sedgy-herbaceous verge, which is fringed by Swamp Scrub (EVC 53) at the few known sites. Rare, far south-west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Characeae</i> spp.	Stonewort	
<i>Cyanogeton</i> spp.	Water Ribbons	
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	outer verges
<i>Machaerina arthropylla</i>	Fine Twig-sedge	
<i>Machaerina juncea</i>	Bare Twig-sedge	
<i>Myriophyllum salsugineum</i>	Lake Water-milfoil	
<i>Schoenoplectus pungens</i>	Sharp Club-sedge	
<i>Typha</i> spp.	Bulrush	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) aquatic herbs	2	+	substantially modified if restricted to very few plants in respective zone
Medium (to small) herbs	4	+	often prostrate, semi-aquatic or otherwise inundation tolerant; substantially modified if restricted to very few plants in respective zone
Medium grasses	1	+	substantially modified if restricted to very few plants in respective zone
Medium (to tall) sedges	2	+	substantially modified if restricted to very few plants in respective zone
Medium (to tall) shrubs	1	25	cover within fringing zone

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus</i> spp.	Fox Tail
<i>Holcus lanatus</i>	Yorkshire Fog

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess lifeforms separately within respective zones and average scores.

Structural dominant	Benchmark cover
Shrubs	50%
Medium (to tall) sedges	10%
Aquatic herbs	Assess for scoring category of >50% benchmark cover

EVC 819: Spike-sedge Wetland

Description:

Low sedgy vegetation of seasonal or intermittent wetlands, dominated by spike-sedges and usually species-poor. Typically treeless, but sparse eucalypts (mostly *E. camaldulensis*) can be present in marginal sites. Scattered in drier lowlands, including the western volcanics, Riverina floodplains and Wimmera.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass

Notes on indicator species

Eleocharis acuta (or rarely *E. pusilla*), monospecific or with *Lachnagrostis filiformis* s.s. and incidental opportunistic species (e.g. *Crassula helmsii*, *Glyceria australis*, *Lythrum hyssopifolia*, *Stellaria* spp., *Cynogeton procerum*). The verges can be more species-rich and grade into other EVCs, notably Plains Grassy Wetland (EVC 125).

Conditions when the EVC should not be assessed

Prolonged dry conditions where plant growth not apparent, also recent inundation prior to emergence of growth.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium herbs	1	+	aquatic (to semi-aquatic); substantially modified if restricted to very few plants
Medium (to small) non-tufted sedges	1	15	one species, substantially modified if not regularly present within vegetation (include culms which are dead but still attached)

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alisma lanceolatum</i>	Water Plantain
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Paspalum distichum</i>	Water Couch
<i>Sagittaria</i> spp.	Sagittaria
<i>Triglochin scilloides</i>	Lilaea

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process		Cover	Scale of severity
Invasion by River Red-gum <i>Eucalyptus camaldulensis</i>	Scattered saplings	<1%	Minor
	Dense regeneration	1-5%	Moderate
	Denser regeneration	>5%	Severe
Invasion by <i>Typha</i> spp.	Scattered plants	<1%	Minor
	Dense regeneration	1-5%	Moderate
	Denser regeneration	>5%	Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess for scoring category of >50% of benchmark cover during drier periods (but approaching conditions when the EVC should not be assessed). Ignore dieback due to seasonal drying out of wetlands. When actively growing, use benchmark.

Structural dominant	Benchmark cover
Spike-sedge <i>Eleocharis</i> spp., generally Common Spike-sedge <i>E. acuta</i> .	30% (benchmark cover is for active growth phase only)

EVC 80: Spring Soak Woodland Aggregate

Description:

Herbland to eucalypt dominated woodland with a shrubby-herbaceous understorey. Herb-rich wetland vegetation associated with soaks and springs. Rare and of very restricted extent, north-east Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eucalyptus</i> spp.	Eucalypt	variously <i>E. blakelyi</i> , <i>E. goniocalyx</i> , <i>E. cadens</i> or <i>E. nortonii</i>
<i>Goodenia macbarronii</i>	Narrow Goodenia	
<i>Leptospermum continentale</i>	Prickly Tea-tree	
<i>Schoenus apogon</i>	Common Bog-sedge	
Examples of herbs, sedges and rushes associated with the above species		
<i>Aphelia gracilis</i>	Slender Aphelia	
<i>Centrolepis strigosa</i> subsp. <i>strigosa</i>	Hairy Centrolepis	
<i>Drosera hookeri</i>	Branched Sundew	
<i>Eragrostis brownii</i>	Common Love-grass	
<i>Glossostigma elatinoides</i>	Small Mud-mat	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Isotoma fluviatilis</i> subsp. <i>australis</i>	Swamp Isotome	
<i>Juncus</i> spp.	Rush	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	5	
Medium shrubs	1	5	
Small to medium herbs	5	5	especially semi- aquatics
Small (to medium) graminoids	4	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Acetosella vulgaris</i>	Sheep Sorrel
<i>Dittrichia graveolens</i>	Stinkwort
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Hypericum perforatum</i> subsp. <i>veronense</i>	St John's Wort
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Solanum nigrum</i> s.s.	Black Nightshade

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp., variously <i>E. blakelyi</i> , <i>E. goniocalyx</i> , <i>E. nortonii</i> , <i>E. cadens</i>	10%

EVC 857: Stony Rises Pond Aggregate

Description:

Collective label for the various zones of wetland vegetation associated with more permanent ponds of basaltic stony rises. Components include Dwarf Floating Aquatic Herbland (EVC 949), Wet Verge Sedgeland (EVC 932) and/or Tall Marsh (EVC 821). Rare, stony rises of most recent volcanics (notably near Camperdown).

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Azolla filiculoides</i>	Pacific Azolla
<i>Carex appressa</i>	Tall Sedge
<i>Crassula helmsii</i>	Swamp Crassula
<i>Lemna disperma</i>	Common Duckweed
<i>Lemna trisulca</i>	Ivy-leaf Duckweed
<i>Myriophyllum</i> spp.	Water-milfoil
<i>Persicaria decipiens</i>	Slender Knotweed
<i>Typha domingensis</i>	Narrow-leaf Cumbungi
<i>Wolffia australiana</i>	Tiny Duckweed

Notes on indicator species

Various associations of species listed above.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

A particular zone may be contracted to an extremely narrow band.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) emergent aquatics	1	+	substantially modified if restricted to very few plants
Tiny floating aquatics	1	+	Either present or absent (any cover)
Medium (to tall) sedges/rushes	2	15	within relevant zone

+ denotes presence

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess zones separately and average scores.

Structural dominant	Benchmark cover
Medium (to tall) emergent aquatics	Assess for scoring category of >50% benchmark cover
Tiny floating aquatics	Assess for scoring category of >50% benchmark cover
Medium (to tall) sedges	30%

EVC 913: Sub-alpine Pond Herbland

Description:

Herbland of small seasonal ponds within sub-alpine to alpine vegetation. These systems of small temporary ponds occur in mosaic with Sub-alpine Wet Heathland (EVC 210) and/or Alpine Damp Grassland (EVC 1002). The geomorphological processes leading to the creation of these ponds are poorly understood, but include solifluction. The known sites are on granitic or basaltic geologies, typically with humified peat soils within an elevation range of c. 1470 - 1760 m. Extremely localised and restricted extent in the Victorian Alps (e.g. Bogong High Plains, near Mt Wellington and Mount Buffalo).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Agrostis s.s. spp.</i>	Bent	
<i>Isolepis crassiuscula</i>	Alpine Club-sedge	
<i>Lobelia gelida</i>	Snow Pratia	Very restricted, Mt Buffalo
<i>Myriophyllum pedunculatum</i> subsp. <i>pedunculatum</i>	Mat Water-milfoil	
<i>Ranunculus millanii</i>	Dwarf Buttercup	
<i>Ranunculus pimpinellifolius</i>	Bog Buttercup	
Species around pond verges		
<i>Baeckea gunniana</i>	Alpine Baeckea	
<i>Carex gaudichaudiana</i>	Fen Sedge	
<i>Deyeuxia brachyathera</i>	Short Bent-grass	
<i>Dracophyllum continentis</i>	Candle Heath	
<i>Gonocarpus micranthus</i> subsp. <i>micranthus</i>	Creeping Raspwort	
<i>Juncus spp.</i>	Rush	
<i>Plantago muelleri</i>	Star Plantain	
<i>Poa spp.</i>	Tussock Grass	
<i>Rytidosperma spp.</i>	Wallaby Grass	

Conditions when the EVC should not be assessed

None other than as imposed by weather conditions and snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Prostrate or small dicot herbs	2	25	Within vegetated areas of ponds
Prostrate or small grasses and sedges	1	5	Within vegetated areas of ponds

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Prostrate or small herbs (in vegetated sections of ponds)	50%

EVC 210: Sub-alpine Wet Heathland

Description:

Wet treeless heathland habitat of sub-alpine to alpine soaks or flats along streams. Some communities are difficult to interpret as a consequence of degradation of bogs arising from cattle and horse grazing. Localised within higher mountains. Sub-alpine versions are often shrubbier than higher elevation alpine bog systems.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Baeckea gunniana</i>	Alpine Baeckea	
<i>Callistemon ptyoides</i>	Alpine bottlebrush	
<i>Empodisma minus</i>	Spreading Rope-rush	
<i>Epacris</i> spp.	Heath	notably <i>E. paludosa</i>
<i>Hakea microcarpa</i>	Small-fruit Hakea	
<i>Sphagnum cristatum</i>	Sphagnum moss	

Conditions when the EVC should not be assessed

None other than as imposed by weather conditions and snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	2	10	
Small shrubs	2	5	
Medium herbs	1	+	substantially modified if restricted to very few plants
Small herbs	3	2	also includes semi-aquatic species
Medium to tall sedges	1	+	substantially modified if restricted to very few plants, or not present as at least localized patches associated with drainage channels

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Festuca rubra</i> s.l.	Red Fescue
<i>Holcus lanatus</i>	Yorkshire fog
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Prunella vulgaris</i>	Self-heal
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium shrubs	20%

EVC 917: Sub-alpine Wet Sedgeland

Description:

Treeless tussocky (grassy-sedgy) vegetation of wet plains on sub-alpine (apparently to alpine) creek flats, with patchy inter-tussock matting of *Sphagnum* spp. (with few large *Sphagnum* hummocks, and patchy *Callistemon* shrubland, both primarily on upper margins). Relatively species-poor where tussocks or sward density is moderate to high. Rare, lower elevation snowfields.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Callistemon ptyoides</i>	Alpine Bottlebrush	Patchy
<i>Carex appressa</i>	Tall Sedge	
<i>Carex gaudichaudiana</i>	Fen Sedge	
<i>Poa</i> spp.	Tussock Grass	notably <i>Poa helmsii</i>
<i>Psychrophila introloba</i>	Alpine Marsh-marigold	
<i>Sphagnum</i> spp.	Peat Moss	

Conditions when the EVC should not be assessed

None other than as imposed by weather conditions and snow cover.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Bryophyte (<i>Sphagnum</i>)	1	5	low matting
Medium (to tall) tufted grasses and sedges	3	20	
Small semi-aquatic herbs	2	+	substantially modified if restricted to very few plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus effusus</i> subsp. <i>effusus</i>	Soft Rush
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Allow for impact of snowfalls on sedge cover.

Structural dominant	Benchmark cover
Sedges (<i>Carex</i> spp.)	40%

EVC 918: Submerged Aquatic Herbland

Description:

Extensive submerged beds of Eel Grass (*Vallisneria australis*) in lakes and watercourse ponds. Restricted, mainly in west to north-west, apparently depleted by carp.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Myriophyllum</i> spp.	Water Milfoil	may also be present
<i>Vallisneria australis</i>	Eel Grass	typically dominant as a submerged sward

Notes on indicator species

Submerged Aquatic Herbland can occur in association with a range of wetland components, including Tall Marsh (EVC 821), Aquatic Herbland (EVC 653), Brackish Aquatic Herbland (EVC 537) and (rarely) Saline Aquatic Meadow (EVC 842).

Conditions when the EVC should not be assessed

During dry periods when vegetation is dormant.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Strap-leaved aquatics	1	10

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Eel Grass <i>Vallisneria australis</i>	20%

EVC 820: Sub-saline Depression Shrubland

Description:

Low open shrubland/herbland of the highest terraces of the former (i.e. pre 1750) Murray River floodplain in far north-west, dominated by chenopods and succulents, occupying semi-saline treeless pans within the drier (more elevated) parts of the Riverine Chenopod Woodland (EVC 103) zone. Rare, far north-west of the State.

Indicator species (some or all of these species should be present)

Scientific name	Common name
Major species	
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	Rounded Noon-flower
<i>Malacocera tricornis</i>	Goat Head
<i>Sclerolaena tricuspis</i>	Streaked Copperburr
Variously with major species	
<i>Cressa australis</i>	Rosinweed
<i>Frankenia</i> spp.	Sea Heath
<i>Maireana pentagona</i>	Hairy Bluebush
<i>Salicornia</i> spp.	Glasswort

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small (to prostrate) shrubs	3	10
Succulent herbs	2	5
Medium (to small) herbs	3	10

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Bromus rubens</i>	Red Brome
<i>Carrichtera annua</i>	Ward's Weed
<i>Hordeum</i> spp.	Barley Grass
<i>Medicago minima</i>	Little Medic
<i>Parapholis incurva</i>	Coast Barb-grass
<i>Vulpia bromoides</i>	Squirrel-tail Fescue

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised (inadequately known).

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small chenopods (including shrubs and herbs)	25%

EVC 49: Swamp Heathland Aggregate

Description:

Collective label for the various zones of densely shrubby vegetation associated with waterlogged flats on acidic soils of the Central Highlands. Considered to include three component EVCs (Riparian Scrub [EVC 191], Wet Heathland [EVC 8] and the terrestrial EVC Damp Heathy Woodland). Confined to lower elevations of central highlands east of Melbourne.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Chorizandra cymbaria</i> s.s.	Heron Bristle-sedge
<i>Empodisma minus</i>	Spreading Rope-rush
<i>Epacris lanuginosa</i>	Woolly-style Heath
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Gleichenia</i> spp.	Coral Fern
<i>Machaerina tetragona</i>	Square Twig-sedge
<i>Melaleuca squarrosa</i>	Scented Paperbark
<i>Pultenaea weindorferi</i>	Swamp Bush-pea

Notes on indicator species

Typically fringed by Damp Heathy Woodland dominated by *Eucalyptus cephalocarpa* s.l.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

General comments on assessing critical lifeform groups

Small herbs may be absent from long-unburnt vegetation.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tall shrubs (to small trees)	2	25	
Medium shrubs	3	5	
Scrambling plants, notably ferns	1	+	substantially modified if, within scrubby zones, restricted to very few plants
Small herbs	2	+	substantially modified if restricted to very few plants
Tall graminoids	2	2	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cirsium vulgare</i>	Spear Thistle
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lotus uliginosus</i>	Greater Bird's-foot Trefoil
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus</i> spp.	Bramble

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall shrubs (to small trees) e.g. <i>Leptospermum</i> / <i>Melaleuca</i> spp.	50%

EVC 53: Swamp Scrub

Description:

Dense (and potentially up to 10-15 m tall) shrubby vegetation of relatively fertile swampy flats, dominated by Myrtaceous shrubs (to small trees), ground-layer often sparse, aquatic species conspicuous, sphagnum and/or ferns tolerant of waterlogging sometimes present. Formerly widespread in cooler lowland southern areas of Victoria. Note that much of the prior EVC mapping has included the drier (non wetland) Damp Melaleuca Scrub (EVC 948), and the saline Estuarine Scrub (EVC 953) within a broader circumscription of Swamp Scrub. Damp Melaleuca Scrub is distinguished by a ground-layer dominated by terrestrial species (e.g. grasses and forbs with bryophytes and lichens) and Estuarine Scrub by a ground-layer dominated by salt-tolerant to halophytic species.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Cyanogeton</i> spp.	Water Ribbons
<i>Isolepis inundata</i>	Swamp Club-sedge
<i>Leptospermum lanigerum</i>	Woolly Tea-tree
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Ornduffia</i> spp.	Marsh Flower

Notes on indicator species

Swamp Scrub can interface with a range of EVCs, including Riparian Forest (EVC 18), Swampy Woodland (EVC 937), Swampy Riparian Woodland (EVC 83), Riparian Scrub (EVC 191) and Seasonally Inundated Shrubby Woodland (EVC 195), and local floristics can reflect these transitions.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Tall shrubs (to small trees)	1	25	except locally where in mosaic with wetter patches (e.g. aquatics)
Tall aquatic herbs	1	+	substantially modified if restricted to very few plants
Medium (to small) aquatic to semi-aquatic herbs	2	5	
Small (to medium) grasses and sedges	3	2	
Tall tufted graminoids	1	+	substantially modified if restricted to very few plants

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Cirsium vulgare</i>	Spear Thistle
<i>Delairea odorata</i>	Cape Ivy
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lotus subbiflorus</i>	Hairy Bird's-foot Trefoil
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Rubus anglocandicans</i>	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Tall shrubs (to small trees), <i>Melaleuca</i> spp./ <i>Leptospermum</i> spp.	50%

EVC 2004: Swamp Scrub/Gahnia Sedgeland Complex

Description:

Dense shrubby sedgeland on swampy ground on limestone geologies, structurally and floristically intermediate between Gahnia Sedgeland (EVC 968) and Swamp Scrub (53). Very localised in the far south-west of the State (e.g. Long Swamp).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acaena novae-zelandiae</i>	Bidgee-widgee	
<i>Blechnum</i> spp.	Water Fern	
<i>Cassytha melantha</i>	Coarse Dodder-laurel	
<i>Eucalyptus ovata</i>	Swamp Gum	outer margins
<i>Gahnia clarkei</i>	Tall Saw-sedge	
<i>Gahnia trifida</i>	Coast Saw-sedge	
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort	
<i>Lachnagrostis scabra</i>	Rough Blown-grass	
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	
<i>Leucopogon</i> sp. aff. <i>parviflorus</i>	Condah Beard-heath	
<i>Machaerina arthropylla</i>	Fine Twig-sedge	
<i>Machaerina juncea</i>	Bare Twig-sedge	
<i>Melaleuca squarrosa</i>	Scented Paperbark	
<i>Ozothamnus ferrugineus</i>	Tree Everlasting	outer margins
<i>Poa tenera</i>	Slender Tussock-grass	
<i>Pteridium esculentum</i>	Austral Bracken	
<i>Urtica incisa</i>	Scrub Nettle	
<i>Viola hederacea</i> sensu Entwisle (1996)	Ivy-leaf Violet	

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to tall shrubs	3	10
Medium to tall sedges	4	20
Small to medium herbs	4	5
Small to medium non-tufted grasses	1	2
Ground Ferns	2	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Rubus fruticosus</i> spp. <i>agg.</i>	Blackberry
<i>Cirsium vulgare</i>	Spear Thistle

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall shrubs	20%

EVC 83: Swampy Riparian Woodland

Description:

Eucalypt dominated woodland vegetation (in mosaic with scrub/reed-beds) associated with very low-gradient streams within areas subject to riparian processes. Typically constitutes linear wetland, but includes drier banks and levees, as for Floodplain Riparian Woodland (EVC 56). Scattered in moister lowland areas to foothill elevations (e.g. Strathbogie Tableland).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia melanoxylon</i>	Blackwood	
<i>Calystegia sepium</i> subsp. <i>roseata</i>	Large Bindweed	
<i>Eucalyptus ovata</i> subsp. <i>ovata</i>	Swamp Gum	
<i>Eucalyptus camphora</i> subsp. <i>humeana</i>	Mountain Swamp-gum	
<i>Leptospermum lanigerum</i>	Woolly Tea-tree	
<i>Melaleuca ericifolia</i>	Swamp Paperbark	Southern Victoria only
<i>Persicaria decipiens</i>	Slender Knotweed	
<i>Phragmites australis</i>	Common Reed	
<i>Poa labillardierei</i>	Common Tussock-grass	
<i>Poa ensiformis</i>	Sword Tussock-grass	

Conditions when the EVC should not be assessed

None recognised outside of flood conditions.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	7	
Small trees/tall shrubs	3	5	
Medium (to tall) herbs	3	1	especially semi-aquatics
Tall non-tufted graminoids	1	5	leafy
Tall tufted graminoids	4	10	
Medium non-tufted sedges and grasses	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Acetosella vulgaris</i>	Sheep Sorrel
<i>Callitriche stagnalis</i>	Common Starwort
<i>Carduus</i> spp.	Slender Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Ehrharta erecta</i> var. <i>erecta</i>	Panic Veldt-grass
<i>Erythranthe moschata</i>	Musk Monkey-flower
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Lotus corniculatus</i>	Bird's-foot Trefoil
<i>Lotus</i> spp.	Trefoil
<i>Nasturtium officinale</i>	Watercress
<i>Paspalum dilatatum</i>	Paspalum
<i>Paspalum distichum</i>	Water Couch
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Prunella vulgaris</i>	Self-heal
<i>Rosa rubiginosa</i>	Sweet Briar
<i>Rubus anglocandicans</i>	Blackberry
<i>Rubus</i> spp.	Bramble
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp., principally Swamp Gum <i>E. ovata</i> subsp. <i>ovata</i>	15%

EVC 937: Swampy Woodland

Description:

Swampy Woodland denotes a poorly-understood range of vegetation types of poorly-drained, seasonally waterlogged heavy soils. In the strict sense the label applies to at least seasonally waterlogged vegetation of wet flats, not subject to direct flooding from major streams, but receiving water through seepage or surface run-off. In some instances Swampy Woodland can occur to the rear of current levees on floodplains, receiving water via minor side streams rather than direct flooding from the main watercourse. The distinctions between Swampy Riparian Woodland (EVC 83) and Swampy Woodland become more difficult where the habitats occur in narrow bands along low gradient valleys in more dissected terrain. Swampy Woodland occurs as an outer zone to some wetland systems. Formerly widespread in cooler southern areas, mainly in the east, extending into margins of the highlands.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Acacia melanoxylon</i>	Blackwood	
<i>Acacia verticillata</i>	Prickly Moses	
<i>Carex</i> spp.	Sedge	
<i>Coprosma quadrifida</i>	Prickly Currant-bush	
<i>Eucalyptus camphora</i> subsp. <i>humeana</i>	Mountain Swamp-gum	potentially including undescribed species
<i>Eucalyptus fulgens</i>	Green Scentbark	can be present, especially in drier versions
<i>Eucalyptus ignorabilis</i> s.l.	Green Scentbark	can be present, especially in drier versions
<i>Eucalyptus obliqua</i>	Messmate Stringybark	can be present, especially in drier versions
<i>Eucalyptus ovata</i> subsp. <i>ovata</i>	Swamp Gum	typical dominant
<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint	can be present, especially in drier versions
<i>Eucalyptus yarraensis</i>	Yarra Gum	
<i>Goodenia ovata</i>	Hop Goodenia	
<i>Lepidosperma</i> spp.	Sword Sedge	
<i>Melaleuca ericifolia</i>	Swamp Paperbark	
<i>Ozothamnus ferrugineus</i>	Tree Everlasting	
<i>Poa</i> spp.	Tussock Grass	

Notes on indicator species

Where present, *Melaleuca ericifolia* is typically of reduced vigour relative to Swamp Scrub (EVC 53) and Swampy Riparian Woodland (EVC 83).

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Trees	1	10	
Tall shrubs (to small trees)	2	5	
Medium (to small) herbs	3	5	especially semi-aquatic species
Tall tufted graminoids	3	20	
Tall non-tufted sedges and rushes	1	+	substantially modified if restricted to very few plants
Small (to medium) sedges and rushes	3	5	also non-tufted grasses

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Paspalum</i> spp.	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Rubus anglocandicans</i>	Blackberry
<i>Trifolium repens</i> var. <i>repens</i>	White Clover

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
<i>Eucalyptus</i> spp.	20%

EVC 920: Sweet Grass Wetland

Description:

Very species-poor wetland vegetation, dominated by Sweet Grass. It is distinguished from Plains Grassy Wetland (EVC 125) by its extremely low diversity. Sweet Grass Wetland is frequently monospecific or virtually so. It can form an inner zone to Plains Grassy Wetland, and in some (but not all) instances a pragmatic approach may be to treat wetland cores dominated by Australian Sweet-grass as a very species-poor phase of Plains Grassy Wetland. Scattered on western volcanics, also recorded from the less-arid Wimmera and south-west Victoria, and with minor atypical occurrences in Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eryngium vesiculosum</i>	Prickfoot	frequently present on drier verges
<i>Glyceria australis</i>	Australian Sweet-grass	
<i>Lachnagrostis perennis</i> spp. agg.	Perennial Blown-grass	
<i>Poa labillardierei</i>	Common Tussock-grass	frequently present on drier verges
<i>Rumex bidens</i>	Mud Dock	

Notes on indicator species

Glyceria australis, sometimes mono-specific or with sparse associated species including *Eleocharis acuta*, *Rumex bidens* and *Lachnagrostis perennis* spp. agg. In some cases a diverse seasonal flora (with affinities to Plains Grassy Wetland) can be expressed as inundation retreats, whereas in others the vegetation remains very species-poor. In the Perry River catchment in Gippsland, species representative of Wet Verge Herbland (EVC A118) can occur in association with localised patches dominated by *G. australis*.

Conditions when the EVC should not be assessed

Prolonged drought conditions, where vegetation is too desiccated to interpret.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium semi-aquatic grasses	1	7

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

Circumstances where some critical lifeform groups may not be evident

None recognised (subject to consideration of conditions when the EVC should not be assessed).

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Australian Sweet-grass <i>Glyceria australis</i>	15%

EVC 821: Tall Marsh

Description:

Wetland dominated by tall emergent graminoids, typically in thick, species-poor swards. The structure is variously rushland, sedgeland or reedbed, locally closed or in association or fine-scale mosaic with Aquatic Herbland (EVC 653), e.g. along floodway lagoons. The vegetation is typically treeless, but sparse *Eucalyptus camaldulensis* (or in higher rainfall areas, *Eucalyptus ovata*) are dispersed through some sites where sufficient dry periods occur to allow their survival. Scattered across lowland Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Bolboschoenus</i> spp.	Club Sedge
<i>Cladium procerum</i>	Leafy Twig-sedge
<i>Cyperus</i> spp.	Flat Sedge
<i>Juncus ingens</i>	Giant Rush
<i>Juncus procerus</i>	Tall Rush
<i>Phragmites australis</i>	Common Reed
<i>Schoenoplectus tabernaemontani</i>	River Club-sedge
<i>Typha</i> spp.	Bulrush
Associated Species	
<i>Amphibromus fluitans</i>	River Swamp Wallaby- grass
<i>Azolla</i> spp.	Azolla
<i>Calystegia sepium</i> subsp. <i>roseata</i>	Large Bindweed
<i>Spirodela punctata</i>	Thin Duckweed
<i>Lemna</i> spp.	Duckweed
<i>Myriophyllum</i> spp.	Water-milfoil
<i>Potamogeton</i> spp.	Pondweed
<i>Pseudoraphis spinescens</i>	Spiny Mud-grass
<i>Rumex bidens</i>	Mud Dock
<i>Stellaria angustifolia</i> subsp. <i>tenella</i>	Matted Starwort
In cooler or more reliably inundated areas	
<i>Urtica incisa</i>	Scrub Nettle
<i>Wolffia</i> spp.	Duckweed

Notes on indicator species

Variously with *P. australis*, *Typha* spp., *J. ingens*, *S. tabernaemontani* and in more marginal sites sometimes also *Bolboschoenus* spp., *Cyperus* spp. or (locally) *Cladium procerum*. Associated species are quite variable.

Conditions when the EVC should not be assessed

None recognised subject to water quality (if beyond the ability to view submerged vegetation). Winter sampling may understate scoring.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Herbs	2	+	scrambling plants and broad-leaved plants which are inundation tolerant (but not aquatics), substantially modified if restricted to very few individuals
Small (to medium) aquatic herbs	1	+	substantially modified if restricted to very few individuals
Small (to medium) aquatic to semi-aquatic graminoids	1	+	sedges and grasses, substantially modified if restricted to very few individuals
Tall monocots	1	20	leafy species, e.g. Cumbungi, reeds, sedges - substantially modified if clearly dying.

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula coronopifolia</i>	Water Buttons
<i>Delairea odorata</i>	Cape Ivy
<i>Galium aparine</i>	Cleavers
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Paspalum distichum</i>	Water Couch
<i>Rorippa palustris</i>	Marsh Yellow-cress
<i>Rubus anglocandicans</i>	Blackberry
<i>Salix</i> spp.	Willow
<i>Symphotrichum subulatum</i>	Aster-weed
<i>Typha latifolia</i>	Lesser Reed-mace

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where Tall Marsh is a sparse component in mosaic or complex with other EVCs, assess for scoring category of >50% of benchmark cover.

Structural dominant	Benchmark cover
Tall graminoids, variously Bulrush <i>Typha</i> spp., Common Reed <i>Phragmites australis</i> , River Club-sedge <i>Schoenoplectus tabernaemontani</i> , Club sedge <i>Bolboschoenus</i> spp. (but not <i>B. caldwellii</i> - see EVC 656 Brackish Wetland Aggregate) and Giant Rush <i>Juncus ingens</i> or Tall Rush <i>Juncus procerus</i>	40%

EVC 999: Unknown/Unclassified

Description:

Applicable where vegetation cannot be allocated to a defined EVC and the unvegetated descriptor is not relevant. This can apply in wetlands which have been dry for protracted periods, resulting in colonization by opportunistic dryland species. In some cases this cover may be temporary, while in others it may be indicative of long-term modification.

Indicator species (some or all of these species should be present)

None recognised

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

None recognised.

2. WEEDS

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

None recognised.

EVC 990: Unvegetated (open water/bare soil/mud)

Description:

Low lying areas which are unvegetated (or nearly so), at least in relation to vascular flora, including relevant habitat on intertidal mudflats. Widespread wetland component, which may or may not alternate across time with various vegetated EVCs.

Indicator species (some or all of these species should be present)

Lacking vascular flora (or with sparse opportunistic species).

Conditions when the EVC should not be assessed

EVC 990 is not scored during IWC assessments; however awareness is required that a currently unvegetated state may be replaced by additional EVCs during wetter phases.

1. CRITICAL LIFEFORM GROUPS

Not relevant.

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Salvinia molesta</i>	Salvinia

Conditions where weeds are considered to have a negligible impact

Occupation of ephemeral species (small to medium grasses and herbs) during prolonged dry periods.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by River Red-gum <i>Eucalyptus camaldulensis</i>	scattered individuals	<1% Minor
	denser regeneration	1-5% Moderate
	denser regeneration	>5% Severe

Circumstances where some critical lifeform groups may not be evident

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Note conditions under which assessment should not be undertaken.

EVC 8: Wet Heathland

Description:

Low shrubby (to sedgy) vegetation associated with impeded drainage on wet flats at lower (below montane) elevations. Scattered across less fertile soils of cooler southern and south-western Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Drosera binata</i>	Forked Sundew
<i>Empodisma minus</i>	Spreading Rope-rush
<i>Gonocarpus micranthus</i>	Creeping Raspwort
<i>Gymnoschoenus sphaerocephalus</i>	Button Grass
<i>Leptocarpus</i> spp. s.l.	Twine Rush
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Lepyrodia</i> spp.	Scale Rush
<i>Melaleuca squarrosa</i>	Scented Paperbark
<i>Sprengelia incarnata</i>	Pink Swamp-heath
<i>Xanthorrhoea</i> spp.	Grass Tree

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium shrubs	3	15	unless tall graminoids dominate, then 5% cover
Small shrubs	2	2	
Medium herbs	2	+	substantially modified if restricted to very few isolated plants
Medium (to small) non-tufted graminoids	3	5	
Tall graminoids	2	5	

+ denotes presence

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Genista linifolia</i>	Flax-leaf Broom
<i>Psoralea pinnata</i>	Blue Psoralea

Conditions where weeds are considered to have a negligible impact
None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

The benchmark cover for the structural dominants combined is 30%.

Structural dominant	Benchmark cover
Medium shrubs	30% combined
Tall graminoids	

EVC A104: Wet Heathland/Plains Grassy Wetland Complex

Description:

Low shrubland dominated by sclerophyllous species, with a diverse grassy-herbaceous ground-layer including species shared with seasonal grassy wetlands of heavy soils on lowland plains. Extremely localised in far south-west Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Allittia cardiocarpa</i>	Swamp Daisy
<i>Amphibromus</i> spp.	Swamp Wallaby-grass
<i>Craspedia paludicola</i>	Swamp Billy-buttons
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Melaleuca gibbosa</i>	Slender Honey-myrtle
<i>Ornduffia reniformis</i>	Running Marsh-flower

Conditions when the EVC should not be assessed

None recognised

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small to medium shrubs	2	20
Medium to tall tufted grasses	1	10
Medium to tall herbs	4	5

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by Coast Wattle (<i>Acacia longifolia</i> subsp. <i>sophorae</i>)	Incidental plants	Negligible
	Scattered plants	<5%
	Frequent plants	>5%

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small to medium shrubs	40%

EVC A105: Wet Heathland/Plains Sedgy Wetland Complex

Description:

Low shrubland dominated by sclerophyllous species, with a sedgy ground-layer including herbaceous species shared with seasonal wetlands of heavy soils on lowland plains. Extremely localised in far south-west Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Allittia cardiocarpa</i>	Swamp Daisy
<i>Machaerina arthropphylla</i>	Fine Twig-sedge
<i>Craspedia paludicola</i>	Swamp Billy-buttons
<i>Melaleuca gibbosa</i>	Slender Honey-myrtle
<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Senecio psilocarpus</i>	Swamp Fireweed

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

During and immediately after sustained inundation, may also be underscored during winter.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small to medium shrubs	1	20
Medium to tall sedges	1	10
Medium to tall herbs	4	5

2. WEEDS

High threat weed species

None recognised.

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by Coast Wattle (<i>Acacia longifolia</i> subsp. <i>sophorae</i>)	Incidental plants	Negligible
	Scattered plants	<5%
	Frequent plants	>5%

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small to medium shrubs	40%

EVC 931: Wet Heathland/Sedge Wetland Complex

Description:

Sedgy open heathland, transitional in structure and floristics between Wet Heathland (EVC 8) and Sedge Wetland (EVC 136). Rare, recorded with certainty only from south-west Victoria.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Lepyrodia</i> spp.	Scale Rush
<i>Schoenus tesquorum</i>	Soft Bog-sedge
Associated species	
<i>Amphibromus recurvatus</i>	Dark Swamp Wallaby-grass
<i>Centella cordifolia</i>	Centella
<i>Lobelia pedunculata</i> s.l.	Matted Pratia
<i>Mazus pumilio</i>	Swamp Mazus
<i>Melaleuca squarrosa</i>	Scented Paperbark
<i>Ornduffia reniformis</i>	Running Marsh-flower
<i>Rytidosperma semiannulare</i>	Wetland Wallaby-grass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium shrubs	2	5
Small (to medium) semi-aquatic herbs	3	5
Tall sedges	1	15
Medium grasses/sedges	3	5

2. WEEDS

High threat weed species

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Assess lifeforms separately and average scores.

Structural dominant	Benchmark cover
Sedges	40%
Medium shrubs	10%

EVC A107: Wet Saltmarsh Herbland

Description:

Low herbland dominated by succulent to semi-succulent halophytic herbs or semi-shrubs, occupying low-lying areas of coastal saltmarsh subject to regular inundation. Widespread but confined to restricted areas of suitable habitat in sheltered parts of the Victorian coast.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Hemichroa pentandra</i>	Trailing Hemichroa
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort
<i>Samolus repens</i>	Creeping Brookweed
<i>Suaeda australis</i>	Austral Seablite
<i>Triglochin striata</i>	Streaked Arrowgrass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to small succulent herbs	2	30

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Sporobolus anglica</i>	Common Cord-grass
<i>Sporobolus x townsendii</i>	Townsend's Cord-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by Swamp Paperbark (<i>Melaleuca ericifolia</i>): Active invasion fronts of suckers <1.5 m tall	<1%	Minor
	1-5%	Moderate
	>5%	Severe
Invasion by Grey Mangrove (<i>Avicennia marina</i>): Active invasion fronts of young plants	<1%	Minor
	1-5%	Moderate
	>5%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to small herbs	60%

EVC A108: Wet Saltmarsh Shrubland

Description:

Shrubland dominated by halophytic species and subject to regular tidal inundation. Scattered along Victorian coast, but largely confined to between Breamlea and Corner Inlet.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Atriplex cinerea</i>	Coast Saltbush	rare dominant drier sites
<i>Atriplex paludosa</i>	Marsh Saltbush	less common dominant drier sites
<i>Distichlis distichophylla</i>	Australian Salt-grass	drier sites
<i>Salicornia quinqueflora</i> subsp. <i>quinqueflora</i>	Beaded Glasswort	wetter sites
<i>Suaeda australis</i>	Austral Seablite	
<i>Tecticornia arbuscula</i>	Shrubby Glasswort	usual dominant

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium to small shrubs	1	20
Medium to small succulent herbs	1	5

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Sporobolus anglica</i>	Common Cord-grass
<i>Sporobolus x townsendii</i>	Townsend's Cord-grass

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Chenopod shrubs	40%

EVC A116: Wet Sedgy Herbland

Description:

Species-poor vegetation dominated by herbaceous monocots other than grasses, sometimes with sparse, taller emergent rushes. It occurs on silty alluvium in coastal plain habitats prone to shallow seasonal inundation. Apparently very rare and localised, known only from restricted occurrences in west to south Gippsland, where sometimes occurring adjacent to or in mosaic with Swamp Scrub (EVC 53).

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Eleocharis pusilla</i>	Small Spike-sedge	
<i>Isolepis inundata</i>	Swamp Club-sedge	
<i>Triglochin striata</i>	Streaked Arrowgrass	robust forms

Additional minor species:

<i>Cycnogeton microtuberosum</i>	Eastern Water-ribbons
<i>Cycnogeton procerum</i> s.s.	Water Ribbons
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Goodenia radicans</i>	Shiny Swamp-mat
<i>Isolepis producta</i>	Nutty Club-sedge
<i>Lobelia anceps</i>	Angled Lobelia
<i>Machaerina rubiginosa</i> s.s.	Soft Twig-sedge
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil

Occasional sparse component:

<i>Juncus ingens</i>	Giant Rush
<i>Juncus pallidus</i>	Pale Rush

Conditions when the EVC should not be assessed

None recognised, other than it may not be practicable to adequately assess the vegetation if it is inundated with turbid water during flood conditions.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to small) graminoids	4	50	Sedges and Arrowgrass
Aquatic to semi-aquatic herbs	2	1	1

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Cotula coronopifolia</i>	Water Buttons
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch
<i>Eleocharis parvula</i>	Dwarf Spike-sedge
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Paspalum distichum</i>	Water Couch
<i>Polypogon viridis</i>	Water Bent

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Non-grass herbaceous monocots	100%

EVC 12: Wet Swale Herbland

Description:

Wetland vegetation of coastal barrier lagoons, including a mixture of aquatic grasses, sedges and herbs. Rare, East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Asperula subsimplex</i>	Water Woodruff
<i>Cyanogeton</i> spp.	Water Ribbons
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Machaerina articulata</i>	Jointed Twig-sedge
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
<i>Ornduffia reniformis</i> .	Running Marsh-flower
<i>Potamogeton tricarlinatus</i> s.l.	Floating Pondweed
<i>Pseudoraphis paradoxa</i>	Slender Mud-grass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to small) aquatic herbs	5	10	
Grasses and/or sedges	2	5	floating/aquatic, turf-forming
Medium aquatic to semi-aquatic non-tufted sedges	2	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Prunella vulgaris</i>	Self-heal

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Where present score each lifeform separately and average.

Structural dominant	Benchmark cover
Aquatic herbs e.g. Water-milfoil <i>Myriophyllum</i> spp., Running Marsh-flower <i>Ornduffia reniformis</i>	20%
Grasses e.g. Slender Mud-grass <i>Pseudoraphis paradoxa</i>	10%
Sedges e.g. Tall Spike-sedge <i>Eleocharis sphacelata</i>	10%

EVC A118: Wet Verge Herbland

Description:

Low herbland dominated by amphibious/semi-aquatic species. It occupies seasonally wet habitat in the outer drawdown zone of wetlands that have a sufficiently reliable water supply and elevated watertable to support Aquatic Herbland (EVC 653). Wet Verge Herbland typically abuts Aquatic Herbland, but is much more diverse than that EVC. The soils are typically high in organic content. Apparently very restricted, scattered across southern lowland parts of the State, where often bounded by Swamp Scrub (EVC 53), Riparian Scrub (EVC 171) or sometimes the terrestrial EVC Damp Heathland, on peaty to sandy soils.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Centella cordifolia</i>	Centella	
<i>Crassula helmsii</i>	Swamp Crassula	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Gonocarpus micranthus</i>	Creeping Raspwort	
<i>Goodenia humilis</i>	Swamp Goodenia	
<i>Gratiola pubescens</i>	Glandular Brooklime	
<i>Hemarthria uncinata</i>	Mat Grass	
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort	
<i>Hydrocotyle tripartita</i>	Slender Pennywort	
<i>Hypericum japonicum</i>	Matted St John's Wort	
<i>Isolepis fluitans</i>	Floating Club-sedge	
<i>Isolepis inundata</i>	Swamp Club-sedge	
<i>Isotoma fluviatilis subsp. australis</i>	Swamp Isotome	
<i>Juncus holoschoenus</i>	Joint-leaf Rush	
<i>Juncus planifolius</i>	Broad-leaf Rush	
<i>Lachnagrostis filiformis s.s.</i>	Common Blown-grass	
<i>Lachnagrostis perennis spp. agg.</i>	Perennial Blown-grass	
<i>Lilaeopsis polyantha</i>	Australian Lilaeopsis	
<i>Lobelia anceps</i>	Angled Lobelia	
<i>Montia australasica</i>	White Purslane	
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil	
<i>Schoenus maschalinus</i>	Leafy Bog-sedge	
<i>Triglochin striata</i>	Streaked Arrowgrass	robust forms

Notes on indicator species

Occasional larger sedges and rushes or incidental plants of shrubs such as *Leptospermum continentale* can also be present, but are not representative.

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Small to medium semi-aquatic/amphibious herbs	5	20
Small to medium sedges	2	1
Grasses/rushes	2	1

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Alopecurus pratensis</i>	Meadow Fox-tail
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Juncus articulatus</i> subsp. <i>articulatus</i>	Jointed Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Juncus pallens</i>	Small-flower Rush
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Mentha pulegium</i>	Pennyroyal
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

Indicator of altered process	Cover	Scale of severity
Invasion by Tea-tree or Paperbark	Up to 5%	Minor
(<i>Leptospermum</i> spp. or <i>Melaleuca</i> spp.):	5-10%	Moderate
More than incidental to scattered plants	>10%	Severe

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small to medium semi-aquatic herbs	40%

EVC A125: Wet Verge Herbland/Floodway Pond Herbland Complex

Description:

Low herbland dominated by a mixture of amphibious/semi-aquatic species, species capable of dormancy during inundation events, and short-lived species which germinate following recession of the water's edge. The floristics comprise a mixture of species which are characteristic of either Wet Verge Herbland (EVC A118) or Floodway Pond Herbland (EVC 810). It occupies the lower drawdown zone of the ponds in situations where inundation is more prolonged than those supporting Wet Verge Herbland (EVC 118), and expresses following drawdown. Wet Verge Herbland/Floodway Pond Herbland Complex is known only from the Perry River - Providence Ponds catchment.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Alternanthera denticulata</i>	Lesser Joyweed
<i>Callitriche sonderi</i>	Matted Water-starwort
<i>Cardamine microthrix</i>	Eastern Bitter-cress
<i>Centella cordifolia</i>	Centella
<i>Centipeda cunninghamii</i>	Common Sneezeweed
<i>Centipeda minima</i> subsp. <i>minima</i> s.s.	Spreading Sneezeweed
<i>Cycnogeton microtuberosum</i>	Eastern Water-ribbons
<i>Gratiola pedunculata</i>	Stalked Brooklime
<i>Gratiola peruviana</i>	Austral Brooklime
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Isolepis fluitans</i>	Floating Club-sedge
<i>Isotoma tridens</i>	Hypsela
<i>Juncus bufonius</i>	Toad Rush
<i>Juncus planifolius</i>	Broad-leaf Rush
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Laphangium luteoalbum</i>	Jersey Cudweed
<i>Lythrum hyssopifolia</i>	Small Loose-strife
<i>Montia australasica</i>	White Purslane
<i>Myriophyllum simulans</i>	Amphibious Water-milfoil
<i>Persicaria prostrata</i>	Creeping Knotweed

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Small to medium herbs	8	30	within drawdown zone
Small (to medium) sedges or rushes	2	1	within drawdown zone
Medium grasses	1	2	within drawdown zone

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Callitriche stagnalis</i>	Common Water-starwort
<i>Cyperus eragrostis</i>	Drain Flat-sedge
<i>Erigeron bonariense</i>	Flaxleaf Fleabane
<i>Ludwigia palustris</i>	Marsh Ludwigia
<i>Paspalum distichum</i>	Water Couch

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised, other than changes due to erosion or deposition (principally of sand slugs) - evaluate according to extent of change in wetland characteristics and vegetation zonation.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Small to medium herbs	60%

EVC 932: Wet Verge Sedgeland

Description:

Tussock (or sometimes sward-forming) sedge dominated wetland component of cooler areas, occasionally occurring as the main wetland vegetation present, typically dominated by *Carex* spp., usually *C. appressa*. Scattered, mostly in south but extending (as a component of aggregate EVCs) to montane elevations in East Gippsland.

Indicator species (some or all of these species should be present)

Scientific name	Common name	Comments
<i>Amphibromus nervosus</i>	Common Swamp Wallaby- grass	
<i>Carex appressa</i>	Tall Sedge	
<i>Carex fascicularis</i>	Tassel Sedge	
<i>Carex gaudichaudiana</i>	Fen Sedge	
<i>Centella cordifolia</i>	Centella	
<i>Crassula helmsii</i>	Swamp Crassula	
<i>Eleocharis acuta</i>	Common Spike-sedge	
<i>Epilobium billardierianum</i>	Variable Willow-herb	
<i>Epilobium hirtigerum</i>	Hairy Willow-herb	
<i>Glyceria australis</i>	Australian Sweet-grass	pale green, less upright forms
<i>Goodenia humilis</i>	Swamp Goodenia	
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Mat Grass	
<i>Juncus amabilis</i>	Hollow Rush	
<i>Juncus gregiflorus</i>	Green Rush	
<i>Juncus holoschoenus</i>	Joint-leaf Rush	
<i>Juncus</i> spp.	Rush	
<i>Lobelia pratioides</i>	Poison Lobelia	
<i>Persicaria decipiens</i>	Slender Knotweed	
<i>Persicaria lapathifolia</i>	Pale Knotweed	
<i>Persicaria prostrata</i>	Creeping Knotweed	
<i>Persicaria strigosa</i>	Knotweed	
<i>Poa labillardierei</i>	Common Tussock-grass	

Notes on indicator species

Can become dominated by *Juncus* spp. in disturbed riparian sites.

Conditions when the EVC should not be assessed

None recognised, subject to water quality and practicality of sampling during flooding.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover	Comments
Medium (to tall) herbs	4	5	
Medium (to tall) tufted sedges and rushes	3	20	
Small (to medium) aquatic to semi-aquatic herbs	4	5	prostrate to mat-forming
Small (to medium) non-tufted grasses and sedges	3	5	

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Paspalum spp.</i>	Paspalum
<i>Phalaris aquatica</i>	Toowoomba Canary-grass
<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Plantago major</i>	Greater Plantain
<i>Rubus anglocandicans</i>	Blackberry
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i>	Curled Dock

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Sedges, primarily Tall Sedge <i>Carex appressa</i> and/or Tassel Sedge <i>Carex fascicularis</i>	40%

EVC A126: Wet Verge Sedgeland/Sedge Wetland Complex

Description:

Sedge-dominated vegetation of the outer zones of wetlands and along floodways, dominated by a mixture of the structural dominants of Wet Verge Sedgeland (EVC 952) and Sedge Wetland (EVC 136). Wet Verge Sedgeland/Sedge Wetland Complex is of very restricted total extent and known only from the Perry River - Providence Ponds catchment.

Indicator species (some or all of these species should be present)

Scientific name	Common name
<i>Acaena novae-zelandiae</i>	Bidgee-widgee
<i>Carex appressa</i>	Tall Sedge
<i>Carex gaudichaudiana</i>	Fen Sedge
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass
<i>Laphangium luteoalbum</i>	Jersey Cudweed
<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
<i>Poa labillardierei</i> var. <i>labillardierei</i>	Common Tussock-grass

Conditions when the EVC should not be assessed

None recognised.

1. CRITICAL LIFEFORM GROUPS

Conditions when specific critical lifeform groups should not be assessed

None recognised.

Critical lifeform groups and threshold values for determining if lifeform is substantially modified

Critical lifeform	No. spp.	% Cover
Medium (to tall) sedges	2	20
Small to medium herbs	2	1
Medium (to tall) grasses	1	2

2. WEEDS

High threat weed species

Scientific name	Common name
<i>Agrostis capillaris</i>	Brown-top Bent
<i>Cenchrus clandestinus</i>	Kikuyu
<i>Cirsium vulgare</i>	Spear Thistle
<i>Erigeron bonariense</i>	Flaxleaf Fleabane
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit
<i>Rubus</i> spp.	Blackberry

Conditions where weeds are considered to have a negligible impact

None recognised.

3. INDICATORS OF ALTERED PROCESSES

None recognised.

4. VEGETATION STRUCTURE AND HEALTH

Structural dominant	Benchmark cover
Medium to tall sedges (species of <i>Carex</i> and <i>Lepidosperma</i>)	40%

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