



Vegetation Gunbower Forest, 'by North Central CMA



## Section 6

# *Further information*





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## 6.1 Acronyms and abbreviations

**AHD** – Australian Height Datum (also see Glossary entry)

**BGLC** – Barengi Gadjin Land Council Aboriginal Corporation

**BLCAC** – Bunurong Land Council Aboriginal Corporation

**CEWH** – Commonwealth Environmental Water Holder

**CMA** – Catchment management authority

**DELWP** – Department of Environment, Land, Water and Planning

**EVC** – Ecological Vegetation Class

**FSL** – Full supply level

**GLaWAC** – Gunaikurnai Land and Waters Aboriginal Corporation

**GWMWater** – Grampians Wimmera Mallee Water

**IVT** – Inter-valley transfer

**MDBA** – Murray-Darling Basin Authority

**MDWWG** – Murray Darling Wetlands Working Group

**ML** – Megalitre (also see glossary entry)

**NVIRP** – Northern Victoria Irrigation Renewal Project

**NVRM** – Northern Victoria Resource Manager

**RMIF** – River Murray Increased Flows

**SAC** – Snowy Advisory Committee

**VEFMAP** – Victorian Environmental Flows Monitoring Assessment Program

**VEWH** – Victorian Environmental Water Holder

**WetMAP** – Wetland Monitoring Assessment Program

**WMPP** – Wimmera-Mallee Pipeline Project

## 6.2 Glossary

**Acid sulphate soils** – Naturally occurring soils containing high quantities of iron sulphates. When these soils remain underwater they are stable, but if they are exposed to air, sulphuric acid is generated and can result in severe environmental impacts.

**Adaptive management** – An iterative decision-making process based on continuous learning that aims to reduce uncertainty over time.

**Allocation (of water)** – The specific volume of water allocated to water entitlements in a given water year or allocated as specified in a water resource plan.

**Australian Height Datum (AHD)** – Height above sea level.

**Azolla** – A native aquatic fern that grows in waterways in dense patches. Its presence usually indicates high levels of nutrients.

**Bank erosion** – The wearing-away of the banks of a stream or river (as distinct from erosion of the bed) that can occur in extensively dry conditions.

**Bank slumping** – A form of mass wasting in a river or stream that occurs when a coherent mass of loosely consolidated materials or rock layers moves a short distance down a slope.

**Bankfull flow** – A flow of sufficient size to reach the top of the riverbank, with little flow spilling onto the floodplain.

**Biodiversity** – The variety or abundance of plant and animal species in a particular habitat or environment.

**Biofilm** – A slimy film of bacteria, other microbes and organic materials that covers underwater surfaces including rocks and snags.

**Biota** – The animal or plant life of a particular area, habitat or geological period.

**Blackwater** – A natural occurrence caused by the breakdown of plant matter causing the water to discolour. The water turns black and can have very low levels of dissolved oxygen, which can stress or kill fish and other animals that breathe underwater.

**Brackish water** – Water that is moderately salty but not as salty as seawater. It may result from the mixing of seawater with freshwater, as in estuaries.

**Carryover** – Unused water of which entitlement holders are allowed to retain ownership into the following season, according to specified rules.

**Catchment management authority** – A statutory authority established to manage river health and regional and catchment planning and to manage waterways, floodplains, salinity and water quality.

**Cease-to-flow** – The period in which there is no discernible flow in a river and partial or total drying of the river channel.

**Cold water pollution** – A phenomena caused by cold water being released into rivers, primarily from large dams, in warmer months.

**Commonwealth Environmental Water Office** – The office that manages water entitlements recovered by the Australian Government through a combination of investments in water-saving infrastructure, water purchases and other water-recovery programs. The entitlements are held by the Commonwealth Environmental Water Holder.

**Confluence** – The point where a tributary joins a larger river (called the main stem) or where two streams meet to become the source of a river of a new name.

**Consumptive water** – Water owned by water corporations or private entitlement holders held in storages and actively released to meet domestic, stock, town and irrigation needs.

**Diadromous fish** – Fish that migrate between freshwater and saltwater.

**Deficit in supply** – The insufficiency of the volume of available environmental water — the supply — to meet identified environmental watering requirements: the demand.

**Drawdown** – Water released from a dam or reservoir at the end of the irrigation season for the purposes of its operation and/or maintenance.

**Ecological vegetation class** – A component of a vegetation classification system, this is a group of vegetation communities based on floristic, structural and ecological features.

**En route (water)** – Water that is on its way to being delivered to urban, rural and irrigation water users.

**Environmental flow study** – A scientific study of the flow requirements of a particular basin's river and wetland systems, that is used to inform decisions about the management and allocation of water resources.

**Environmental objectives** – Measurable target outcomes for each environmental value in the system, to be achieved by ongoing implementation of one or more watering actions as well as complementary actions (such as controlling invasive species or installing fishways). Target outcomes may take years or several decades to achieve.

**Environmental water entitlement** – An entitlement to water to achieve environmental objectives in waterways. It covers an environmental entitlement, environmental bulk entitlement, water share, section 51 licence or supply agreement.

**Environmental water management plan** – A plan developed by a waterway manager setting long-term environmental objectives and based on consultation with key stakeholders, local community and advisory groups to inform the seasonal watering proposal for the particular system.

**Estuary** – A partially enclosed body of water along the coast where freshwater from rivers and streams meets and mixes with saltwater from the sea.

**Expected watering effect** – The physical, chemical, biological or behavioural effect expected from a potential environmental watering action. Each potential environmental watering action will have one or more expected watering effects.

**Fishway** – A series of pools built like steps to enable fish to travel through a waterway, dam or waterfall.

**Fledging** – The stage in a young bird's life from birth until it can fly.

**Flow component** – A component of a river system's flow regime that can be described by its magnitude, timing, frequency and duration (for example, cease-to-flow and overbank flow).

**Fresh** – A small or short-duration, peak-flow event that exceeds the baseflow and lasts for a few days.

**Geomorphology** – The scientific study of landforms and the processes that shape them.

**Groundwater** – Water held underground in the soil or in pores and crevices in rock.

**Headwater** – A tributary stream of a river close to or forming part of its source.

**Headworks system** – A system including various storage infrastructure (such as reservoirs and diversion weirs) to enable connection of multiple waterways.

**Heritage river** – A river listed under the *Heritage Rivers Act 1992* and part of a river and river catchment area in Victoria that has significant nature conservation, recreation, scenic or cultural heritage attributes.

**High-reliability entitlement** – A legally recognised, secure entitlement to a defined share of water. The full allocation of a high-reliability entitlement is expected in most years.

**Hydrology** – The study of the properties of the water and its movement in relation to land.

**Inter-valley transfer** – The transfer of water between river systems to meet demands as a result of water trade between river systems.

**Irrigation release** – The release of water for irrigation purposes.

**Juvenile** – A stage of life at which an animal or plant is not yet fully mature.

**Land manager** – An agency or authority responsible for conserving natural and cultural heritage on public land including parks and reserves (such as Parks Victoria and DELWP).

**Low flow** – A relatively stable, sustained and low flow in a river, generally being its minimum natural level.

**Low-reliability entitlement** – A legally recognised, secure entitlement to a defined share of water. The full allocation of a low-reliability entitlement is expected only in some years.

**Macroinvertebrate** – An animal without a backbone and that can be seen with the naked eye including a worm, snail, mite, bug, beetle, dragonfly and freshwater crayfish. It is also to as a waterbug.

**Macrophyte** – An aquatic plant that is either emergent (growing out of the water, for example phragmites), submergent (growing under the water, for example ribbon weed) or floating (for example floating pondweed).

**Managed release** – A release of water for the environment that is stored in major reservoirs and used for potential watering actions to achieve environmental outcomes.

**Megalitre** – One million (1,000,000) litres.

**Midden** – A site of cultural significance where Aboriginal people left the remains of their meals and other domestic waste.

**Millennium Drought** – One of the worst droughts recorded since post-contact settlement, it went from about 1995 to 2012.

**Operational release** – A release made from a major storage to enable the water distribution system to operate or to make water available to consumptive water users.

**Overbank flow** – The portion of a flood flow that flows outside the main river channel at relatively small depths over part of or the full width of the waterway and in a direction essentially parallel with the direction of the main channel.

**Passing flow** – Water released from a storage to operate a river and distribution system (often to help deliver water for environmental or consumptive uses) and to maintain environmental values and other community benefits. The volume of a passing flow is generally determined by inflows to the storage.

**Permanent trade** – The transfer of ownership of a water share or licence.

**Potential environmental watering action** – An environmental flow component that has been identified for a particular system in a particular year.

**Program partners** – Are those organisations with a responsibility for delivering some part of the environmental watering program. It includes waterway managers, storage managers, land managers, environmental water holders. In some areas, Traditional Owners, scientists and community members may also be program partners.

**Pulse** – A gradual build in the flow of water, typically to replicate the most-suitable conditions for water species (such as for fish to travel and spawn).

**Ramsar-listed wetland** – A wetland listed as internationally significant under the Convention on Wetlands of International Importance signed in Ramsar, Iran in 1971.

**Reach** – A stretch or section of a river, generally defined in an environmental flow study.

**Recruitment** – The increase in plants or animals when they survive to the settlement or maturity stage.

**Regional waterway strategy** – An eight-year action plan prepared by a CMA for the rivers, wetlands and estuaries in its catchment. It provides a single regional planning document for waterways in the area.

**Remnant vegetation** – Patches of native trees, shrubs and grasses remaining after disturbance.

**Return flow** – A flow delivered for environmental purposes and then returned to the downstream system to be reused for other purposes. A returned flow may be captured and stored downstream for later reuse, although most commonly it remains within the waterway for in-stream reuse.

**Riffle** – A relatively shallow section of stream where water flows at a higher velocity with increased turbulence, causing many ripples to be formed on the water surface.

**Riparian vegetation** – Vegetation located in the area of land that adjoins, regularly influences or is influenced by a river.

**Salt wedge** – The transition zone of saltwater and freshwater environments that occurs when a freshwater river flows directly into saltwater.

**Seasonal watering plan** – The VEWH's annual operational document, that outlines potential environmental watering across the state in the forthcoming water year.

**Seasonal watering proposal** – An annual proposal outlining the regional priorities for the use of water for the environment in each water year that is submitted by waterway managers to the VEWH for consideration in its seasonal watering plan.

**Seasonal watering statement** – A statement by the VEWH authorising a CMA to apply or use water from its water for the environment entitlements consistently with the seasonal watering plan.

**Shared benefits** – The many cultural, economic, recreational, social and Traditional Owner benefits of environmental watering.

**Slackwater habitat** – Habitat in a body of water that has little or no flow, typically formed in areas where the current is restricted by obstructions.

**Spawning** – The process of species releasing eggs and sperm to reproduce.

**Stakeholders** – Are those organisations or individuals with a keen interest in the environmental watering program, who are engaged by one of the program partners during planning, delivery or reporting.

**Storage manager** – An organisation appointed by the Minister for Water to operate major water storages in a particular river basin, to deliver water to entitlement holders.

**System operating water** – Water managed by storage managers, held in storages and actively released to ensure the system can deliver consumptive water and water to meet other needs.

**Temporary trade** – The transfer of a seasonal allocation.

**Terrestrial vegetation** – Land-based plants.

**The Living Murray program** – The intergovernmental program that holds an average of 500,000 ML of water for the environment a year for use at six iconic sites along the Murray River.

**Tier 1** – Potential environmental watering actions that are required this year to achieve intended environmental objectives, given current environmental conditions and the planned environmental watering strategies under each climate scenario.

**Tier 1a** – The subset of tier 1 watering actions that the waterway manager proposes to deliver with predicted supply under each climate scenario.

**Tier 1b** – The subset of tier 1 watering actions that the waterway manager does not expect to be able to deliver if available supply is exhausted on tier 1a actions.

**Tier 2** – Potential watering actions that are generally not required every year to achieve intended environmental objectives but are needed over the long-term. At the time of developing a seasonal watering plan, tier 2 potential watering actions are not considered necessary to deliver in the current year under specific climate scenarios, but they are likely to be needed in coming years and may be delivered in the current year if environmental conditions change or to take advantage of operational circumstances.

**Trade** – Water shares, allocations and take-and-use licences that can be traded in Victoria under rules the Minister for Water sets.

**Translocation** – The movement of living organisms from one area to another area where they are given free release.

**Tributary** – A smaller river or creek that flows into a larger river.

**Unregulated (entitlement)** – An entitlement to water declared in periods of unregulated flow in a river system (that is, flows that cannot be captured in storages).

**Unregulated flow** – A natural streamflow that cannot be captured in a major reservoir or storage.

**Victorian Environmental Water Holder (VEWH)** – The independent statutory body responsible for holding and managing Victorian water for the environment entitlements and allocations.

**Victorian environmental watering program** – The overarching program by which all environmental watering actions are planned and delivered and in which all environmental watering partners are involved.

**Water Act 1989** – The legislation that governs water entitlements and establishes the mechanisms for managing Victoria's water resources.

**Water entitlement** – The right to a volume of water that can (usually) be stored in reservoirs and taken and used under specific conditions.

**Water trade** – The process of buying, selling or exchanging water allocation or entitlements.

**Water allocation** – See Allocation (of water).

**Water for the environment** – Water available for environmental purposes including entitlements held by the VEW, passing flows and unregulated flows.

**Water year** – The same as a financial year: from 1 July to 30 June the next year.

**Waterway manager** – The agency or authority (such as a CMA or Melbourne Water) responsible for the environmental management of a catchment or waterway.

**Waterway** – A river, wetland, creek, floodplain, estuary or other body of water.



## 6.3 Contact details

For further information about the *Seasonal Watering Plan 2021-22*, please contact the VEWH.

### Victorian Environmental Water Holder

Ground floor, 8 Nicholson St, East Melbourne, Victoria 3002  
PO Box 500, East Melbourne, Victoria 3002  
(03) 9637 8951  
[general.enquiries@vewh.vic.gov.au](mailto:general.enquiries@vewh.vic.gov.au)  
[www.vewh.vic.gov.au](http://www.vewh.vic.gov.au)

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For specific information about each system and details about specific seasonal watering proposals, please contact the relevant waterway manager.

### Corangamite CMA

64 Dennis Street, Colac, Victoria 3250  
PO Box 159, Colac, Victoria 3250  
(03) 5232 9100  
[info@ccma.vic.gov.au](mailto:info@ccma.vic.gov.au)  
[www.ccma.vic.gov.au](http://www.ccma.vic.gov.au)

### East Gippsland CMA

574 Main Street, Bairnsdale, Victoria 3875  
PO Box 1012, Bairnsdale, Victoria 3875  
(03) 5152 0600  
[egcma@egcma.com.au](mailto:egcma@egcma.com.au)  
[www.egcma.com.au](http://www.egcma.com.au)

### Glenelg Hopkins CMA

79 French Street, Hamilton, Victoria 3300  
PO Box 502, Hamilton, Victoria 3300  
(03) 5571 2526  
[ghcma@ghcma.vic.gov.au](mailto:ghcma@ghcma.vic.gov.au)  
[www.ghcma.vic.gov.au](http://www.ghcma.vic.gov.au)

### Goulburn Broken CMA

168 Welsford Street, Shepparton, Victoria 3630  
PO Box 1752, Shepparton, Victoria 3630  
(03) 5822 7700  
[reception@gbcma.vic.gov.au](mailto:reception@gbcma.vic.gov.au)  
[www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

### Mallee CMA

DPI Complex, Corner Koorlong Avenue and Eleventh Street, Irymple, Victoria 3498  
PO Box 5017, Mildura, Victoria 3502  
(03) 5051 4377  
[reception@malleecma.com.au](mailto:reception@malleecma.com.au)  
[www.malleecma.com.au](http://www.malleecma.com.au)

### Melbourne Water

990 La Trobe Street, Docklands, Victoria 3008  
PO Box 4342, Melbourne, Victoria 3001  
131 722  
[enquiry@melbournewater.com.au](mailto:enquiry@melbournewater.com.au)  
[www.melbournewater.com.au](http://www.melbournewater.com.au)

### North Central CMA

628–634 Midland Highway, Huntly, Victoria 3551  
PO Box 18, Huntly, Victoria 3551  
(03) 5448 7124  
[info@nccma.vic.gov.au](mailto:info@nccma.vic.gov.au)  
[www.nccma.vic.gov.au](http://www.nccma.vic.gov.au)

### North East CMA

Level 1, 104 Hovell Street, Wodonga, Victoria 3690  
PO Box 616, Wodonga Victoria 3689  
1300 216 513  
[necma@necma.vic.gov.au](mailto:necma@necma.vic.gov.au)  
[www.necma.vic.gov.au](http://www.necma.vic.gov.au)

### West Gippsland CMA

16 Hotham Street, Traralgon, Victoria 3844  
PO Box 1374, Traralgon, Victoria 3844  
1300 094 262  
[westgippy@wgcma.vic.gov.au](mailto:westgippy@wgcma.vic.gov.au)  
[www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

### Wimmera CMA

24 Darlot Street, Horsham, Victoria 3400  
PO Box 479, Horsham, Victoria 3402  
(03) 5382 1544  
[wcma@wcma.vic.gov.au](mailto:wcma@wcma.vic.gov.au)  
[www.wcma.vic.gov.au](http://www.wcma.vic.gov.au)

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For specific information about the other environmental water holders in Victoria, please contact one of the following organisations.

### Murray–Darling Basin Authority

Level 4, 51 Allara Street, Canberra City, ACT 2601  
GPO Box 1801, Canberra City, ACT 2061  
(02) 6279 0100  
[inquiries@mdba.gov.au](mailto:inquiries@mdba.gov.au)  
[www.mdba.gov.au](http://www.mdba.gov.au)

### Commonwealth Environmental Water Office

John Gorton Building, King Edward Terrace, Parkes, ACT 2600  
GPO Box 787, Canberra, ACT 2061  
1800 218 478  
[ewater@environment.gov.au](mailto:ewater@environment.gov.au)  
[www.environment.gov.au/water/cewo](http://www.environment.gov.au/water/cewo)



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