

Seasonal Watering Plan 2023-24

Section 6



Section 6 – Further information

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

CEWO – Commonwealth Environmental Water Office

CMA – Catchment management authority

DEECA – Department of Energy, Environment and Climate Action

EVC – Ecological vegetation class

FPMMAC – First People of the Millewa-Mallee Aboriginal Corporation

FSL – Full supply level

GL – Gigalitre (also see glossary entry)

GLaWAC – Gunaikurnai Land and Waters Aboriginal Corporation

GMW – Goulburn Murray Water

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

VMFRP – Victorian Murray Floodplain Restoration Project

WetMAP – Wetland Monitoring Assessment Program

WMPP – Wimmera-Mallee Pipeline Project

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6.2 Glossary

Acid sulphate soils – Naturally occurring soils containing high quantities of iron sulphates. These soils are stable when inundated but can generate sulphuric acid and severe environmental impacts when exposed to air.

Adaptive management – An iterative decision-making process based on continuous learning that aims to improve outcomes over time. Also known as ‘learning by doing’.

Allocation (of water) – The specific volume of water made available against a water entitlement in a given water year.

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.

Bank slumping – When a coherent mass of loosely consolidated materials or rock layers that form part of the river bank moves a short distance down a slope. Bank slumping is usually associated with bank erosion.

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

Biodiversity – The variety 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 plants and animals of a region.

Blackwater – A natural occurrence caused by the breakdown of organic matter in a waterway leading to discolouration. Sometimes the breakdown of organic matter can deplete oxygen in the waterway. When the depletion is severe, it 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 – Allows entitlement holders to retain ownership of unused water allocated or purchased from the current season into the following season, according to specified rules.

Catchment management authority (CMA) – A Victorian statutory authority responsible for the integrated planning and coordination of land, water and biodiversity management in a designated catchment and land protection region. Victoria's CMAs are listed in '6.3 Contact details'.

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 phenomenon caused by cold water being released (usually from large storages) into rivers. Such releases have the potential to disrupt ecological processes (such as fish breeding) that are influenced by the water temperature.

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.

Country – Aboriginal culture revolves around relationships to the land and water. For Traditional Owners, Country is a part of who they are, just as they are a part of it. Country must be respected. Traditional Owners of Country are authorised to speak for Country and its heritage.

Diadromous fish – Fish that migrate between freshwater and saltwater to complete specific parts of their life cycle.

Deficit in supply – The situation when the available volume of water for the environment is insufficient to meet identified requirements to deliver water for the environment.

Drawdown – Water released or allowed to evaporate from a dam, reservoir or wetland to lower the water level. Drawdowns in storages are usually done for operational or maintenance purposes and may be done in wetlands to support specific ecological outcomes.

Ecological vegetation class – A standard unit for classifying vegetation types in Victoria based on floristic, structural and ecological features.

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En route (water) – Water that has been released from a storage and is moving downstream to meet an urban, irrigation or operational need.

Environmental flows study – A scientific study of the flow requirements of a particular river and/or wetland system that is used to inform decisions about the management and allocation of water resources.

Environmental objective – A measurable environmental outcome sought from deliberate management actions (such as the delivery of water for the environment) in a particular system. An environmental objective may take years or even decades to achieve.

Environmental water entitlement – A legal right to take and use water to maintain an Environmental Water Reserve or improve the environmental values and health of a water ecosystem. It covers an environmental entitlement, environmental bulk entitlement, water share, section 51 or take and use licence or supply agreement.

Environmental water management plan – A plan developed by a waterway manager setting long-term environmental objectives and the necessary water regime to support those objectives.

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 – A physical, chemical, biological or behavioural effect expected from a potential action to deliver water for the environment. Each potential action will have one or more expected watering effects.

Fishway – A series of pools built like steps to enable fish to travel past an artificial obstruction like a dam or weir.

Fledging – The stage at which a young bird grows feathers, becomes independent and can fly and leave its nest.

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

Fresh – A small increase in the size of a flow over a short length of time within a river. A fresh can occur in any season and usually lasts from several days to a few weeks.

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

Gigalitre (GL) – One billion litres of water or a thousand megalitres.

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 collection of water storage infrastructure such as reservoirs, diversion weirs and channels that supports the harvest and distribution of water within one or more catchment regions.

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. Water shares are classed by their reliability, which is defined by how often full seasonal allocations are expected to be available. Allocations are made to high-reliability water shares before low-reliability shares.

Hydrology – The study of the properties of 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 DEECA).

Low flow – A relatively stable, sustained flow in a river, generally being its minimum natural level for that season.

Low-reliability entitlement – A legally recognised, secure entitlement to a defined share of water. Allocations are made to high-reliability water shares before low-reliability shares.

Macroinvertebrate (also called a waterbug) – An aquatic animal without a backbone that can be seen with the naked eye. Worms, snails, mites, bugs, beetles, dragonfly larvae, shrimps and freshwater crayfish are all macroinvertebrates.

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

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Managed release – A deliberate release of stored water for the environment to deliver a potential watering action and associated environmental outcomes.

Megalitre (ML) – One million litres of water.

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

Millennium Drought – The Millennium Drought of 1997 to 2009 was the most severe drought experienced in Victoria since European settlement. The drought broke in 2010, the fifth-wettest year on record, and resulted in severe flooding in the summer of 2010-11.

Operational release – A release of water from a storage to support the operation of the water distribution system or make water available to consumptive water users.

Overbank flow – A flow event that exceeds the capacity of the river channel and inundates neighbouring floodplains.

Passing flow – A release of water 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 provide 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 action to deliver water for the environment – An environmental flow component that has been identified for a particular system in a particular year.

Program partner – An organisation responsible for delivering part of the environmental watering program. The VEWH's program partners include Victoria's waterway managers (catchment management authorities and Melbourne Water), the Department of Energy, Environment and Climate Action (DEECA), other environmental water holders, storage managers and land managers. Traditional Owners also increasingly partner in the environmental watering program.

Pulse – Water released to increase the size of a flow for a short length of time, usually to cue an ecological response like triggering the movement of fish.

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 section of a river, generally defined in an environmental flow study.

Recreational values – The objectives and benefits that recreational users and community members associate with the use of waterways for recreational activities. They include wellbeing and enjoyment derived from social interaction, physical activity and relaxation associated with activities like sporting events, fishing, waterskiing, rowing, paddling, camping, walking and gathering with friends and family.

Recruitment – The process where individuals are added to a population, such as when plants and animals mature from their early life stages to breeding ages.

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

Remnant vegetation – Patches of native trees, shrubs and grasses remaining after disturbance (such as by land clearing).

Return flow – The part of a delivery of water for the environment that flows back into the river channel or out the end of a river system and is available for use further downstream. Return flows may be captured and stored for later reuse, but they are more commonly used as the water moves downstream.

Riffle – A shallow section of stream where water flows at a higher velocity, turbulence increases and the surface is disturbed.

Riparian vegetation – Plants that grow along the banks of waterways, in the zone between the waterway and the land next to it.

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

Seasonal watering plan – The VEWH's annual operational document describing potential actions to deliver water for the environment across Victoria in the coming water year.

Seasonal watering proposal – An annual proposal outlining the regional priorities for using water for the environment in each water year that waterway managers submit to the VEWH to consider for its seasonal watering plan.

Seasonal watering statement – An authorisation from the VEWH to allow a CMA or Melbourne Water to apply water from specific environmental entitlements to deliver the watering actions specified in the seasonal watering plan.

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Self-determination – The United Nations Declaration on the Rights of Indigenous Peoples describes self-determination as the ability for indigenous people to freely determine their political status and pursue their economic, social and cultural equity based on their own values and way of life. This means that Traditional Owners have the right to make choices that best reflect them on their journey to self-determination and self-governance.

Shared benefits – Benefits achieved when water is managed primarily to meet the needs of the entitlement holder, but secondary environmental, Traditional Owner, recreation or social benefits are also provided without requiring additional water.

Shared risk – A risk associated with the environmental watering program that is shared by two or more agencies and that requires coordinated management by more than one agency.

Slackwater habitat – An area of a river or stream with little or no current. The area may be immediately downstream of an obstruction like a rock or at the margins of the channel, and they are often important areas for waterbugs, fish larvae and small-bodied fish.

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

Stakeholder – An organisation, group or individual with an interest in the environmental watering program. Program partners engage with stakeholders when they are planning or delivering water for the environment or reporting on the outcomes of the watering.

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

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

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 each year to use at six iconic sites along the Murray River.

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

Tier 1a – The subset of tier 1 watering actions that the waterway manager proposes to deliver with the 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 the available supply is exhausted on tier 1a actions.

Tier 2 – Potential watering actions that are generally not required every year to achieve the intended environmental objectives but are needed over the long term. When a seasonal watering plan is being developed, these actions are not considered necessary to deliver in the current year under specific climate scenarios. They are however likely to be necessary in coming years, and they may be delivered in the current year to take advantage of operational circumstances or if environmental conditions change.

Trade – see Water trading

Traditional Owners – People who, through membership of a descent group or clan, are responsible for caring for particular Country. A Traditional Owner is authorised to speak for Country and its heritage.

Translocation – The movement of living organisms from one area to another 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 during periods of unregulated flow in a river system, usually when high rainfall causes river flow to exceed consumptive and system storage demands.

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 for planning and delivering water for the environment and involving all program partners.

Water Act 1989 – The legislation that governs water entitlements and establishes how Victoria's water resources are managed.

Water entitlement – The right to a volume of water that can usually be stored in a reservoir and taken and used under specific conditions, and the right to receive water allocations, depending on resource availability.

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Water allocation – See Allocation (of water).

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

Water trading – The process of buying, selling or exchanging rights to water. A water trade can be a permanent transfer of ownership of a water entitlement or the trade of an annual water allocation. The Minister for Water sets rules for water trading in Victoria. The term 'trade' used in the seasonal watering plan refers to the purchase, sale or transfer of annual water allocation.

Water year – The twelve-month period from 1 July to 30 June used for allocating, managing and reporting the use of water entitlements.

Waterway manager – The agency or authority (regional CMAs 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.

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6.3 Contact details

For further information about the *Seasonal Watering Plan 2023-24*, please contact the VEWH.

Victorian Environmental Water Holder

Ground floor, 8 Nicholson Street, East Melbourne, Victoria 3002
PO Box 500, East Melbourne, Victoria 3002
(03) 9637 8951

general.enquiries@vewh.vic.gov.au
www.vewh.vic.gov.au

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
1800 002 262

info@ccma.vic.gov.au
www.ccma.vic.gov.au

East Gippsland CMA

574 Main Street, Bairnsdale, Victoria 3875
PO Box 1012, Bairnsdale, Victoria 3875
(03) 5152 0600

reception@egcma.com.au
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
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
www.gbcma.vic.gov.au

Mallee CMA

Agriculture Victoria Centre, Corner Koorlong Avenue and Eleventh Street, Irymple, Victoria 3498
PO Box 5017, Mildura, Victoria 3502
(03) 5051 4377

reception@malleecma.com.au
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
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
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 or (02) 6043 7600

necma@necma.vic.gov.au
www.necma.vic.gov.au

West Gippsland CMA

16 Hotham Street, Traralgon, Victoria 3844

PO Box 1374, Traralgon, Victoria 3844

1300 094 262

www.wgcma.vic.gov.au (which includes a contact form)

Wimmera CMA

24 Darlot Street, Horsham, Victoria 3400

PO Box 479, Horsham, Victoria 3402

(03) 5382 1544

wcma@wcma.vic.gov.au

www.wcma.vic.gov.au

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

Murray-Darling Basin Authority

33 Allara Street, Canberra City, ACT 2601

GPO Box 1801, Canberra City, ACT 2601

(02) 6279 0100 or 1800 630 114

www.mdba.gov.au

Commonwealth Environmental Water Office

John Gorton Building, King Edward Terrace, Parkes, ACT 2600

GPO Box 858, Canberra, ACT 2061

(02) 6274 1111

ewater@environment.gov.au

www.awe.gov.au/water/cewo

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