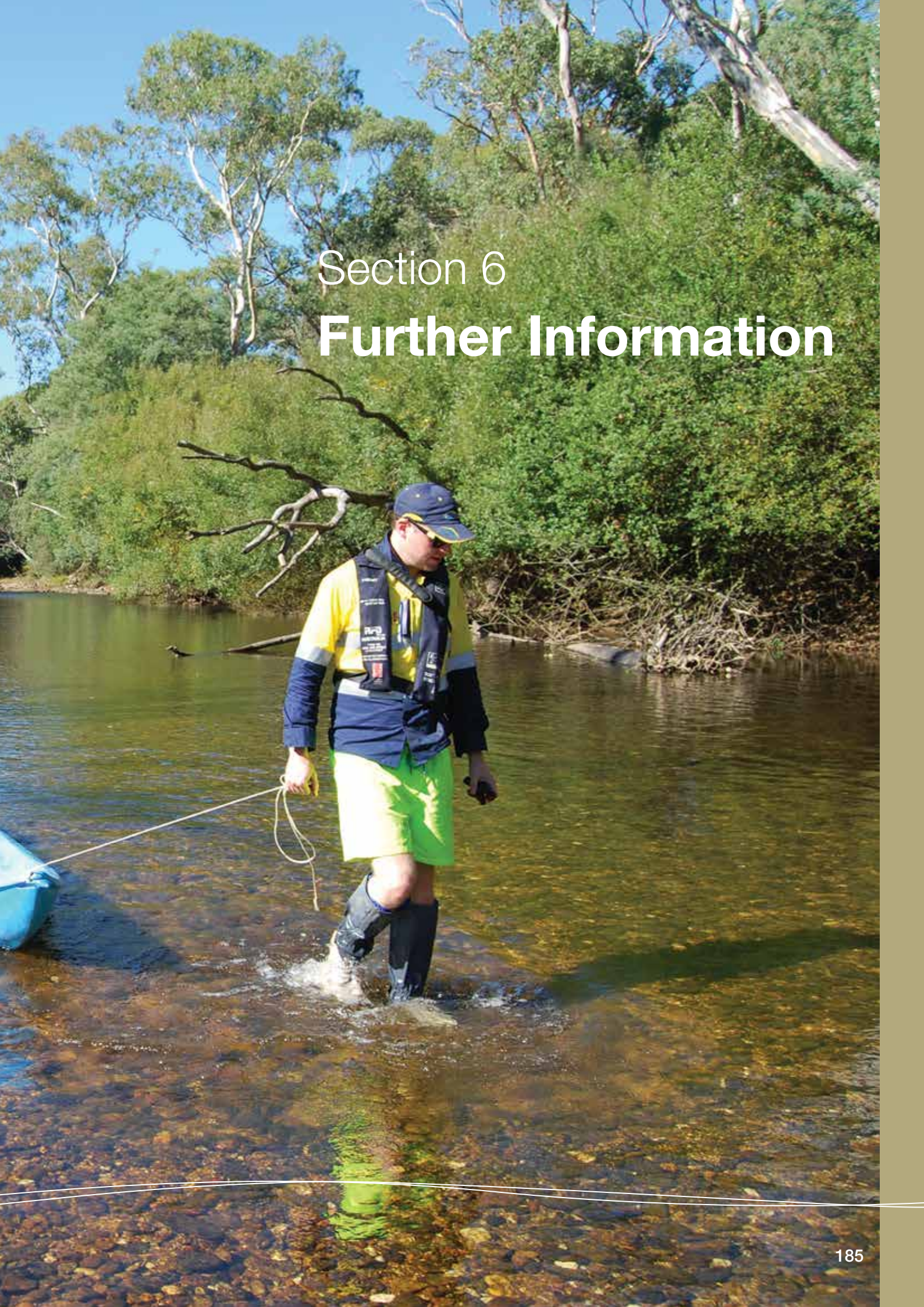


## Section 6

# Further Information





## 6.1 Acronyms

- AHD** – Australian Height Datum (also see Glossary entry)
- CEWH** – Commonwealth Environmental Water Holder
- CEWO** – Commonwealth Environmental Water Office
- CMA** – Catchment management authority
- DELWP** – Department of Environment, Land, Water and Planning
- MDBA** – Murray–Darling Basin Authority
- MDWWG** – Murray Darling Wetlands Working Group
- ML** – Megalitre (also see glossary entry)
- NRM** – natural resource management
- NVIRP** – Northern Victoria Irrigation Renewal Project
- RMIF** – River Murray increased flows
- VEWH** – Victorian Environmental Water Holder

## 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 within a water resource plan.

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

**Azolla** – A native aquatic fern which 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 flows** – Flows of sufficient size to reach the top of the riverbank, with little flow spilling onto the floodplain.

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

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

**Biofilms** – Slimy films of bacteria, other microbes and organic materials that cover 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 dissolved-oxygen levels, which can stress or kill fish and other animals that breathe underwater.

**Brackish water** – Water that is moderately salty but not as salty as sea water. 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** – An 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 CEWH.

**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.

**Drawdown** – Water released from a body of water (such as a reservoir) at the end of the irrigation season for dam operation and maintenance purposes.

**Ecological vegetation communities** – Components of a vegetation classification system, these are groups of vegetation communities based on floristic, structural and ecological features.

**En route** – 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 used to inform decisions about the management and allocation of water resources.

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

**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 outlining 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.

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

**Fledging** – The care of a young bird until it can fly.

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

**Freshes** – Small or short-duration, peak-flow events which exceed the baseflow and last 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 rivers** – Rivers listed under the *Heritage Rivers Act 1992* and parts of rivers and river catchment areas in Victoria which have significant nature conservation, recreation, scenic or cultural heritage attributes.

**High-reliability entitlement** – A legally recognised, secure entitlement to a defined share of water. 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 transfers** – The transfer of water between river systems to meet demands as a result of water trade between river systems.

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

**Macroinvertebrates** – Animals without a backbone and which can be seen with the naked eye including worms, snails, mites, bugs, beetles, dragonflies and freshwater crayfish. They are also referred to as waterbugs.

**Macrophytes** – Aquatic plants that are either emergent (growing out of the water, for example phragmites), submergent (growing under the water, for example ribbonweed) or floating (for example floating pond weed).

**Managed release** – A release of environmental water which is stored in major reservoirs and used for priority 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 settlement, it went from about 1995 to 2012.

**Operational releases** – Releases made from major storages to enable the water distribution system to operate or to make water available to consumptive water users.

**Overbank flows** – 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 flows** – Water released from storages to operate river and distribution systems (often to help deliver water for environmental or consumptive uses) and maintain environmental values and other community benefits. The volume of passing flows is generally determined by inflows to those storages.

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

**Potential environmental watering** – Environmental flow components that have been identified for a particular system in a particular year.

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

**Ramsar-listed wetland** – A wetland listed as internationally significant under the Convention on Wetlands 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 area. It provides a single regional planning document for waterways in the area.

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

**Return flows** – Any flows delivered for environmental purposes and then returned to the downstream system to be reused for other purposes. Returned flows may be captured and stored downstream for later reuse, although most commonly they remain 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 in 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 which occurs when a freshwater river flows directly into saltwater.

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

**Seasonal watering proposal** – An annual proposal outlining the regional priorities for environmental water use in each water year and 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 environmental water entitlements consistently with the seasonal watering plan.

**Shared benefits** – The many recreational, Aboriginal cultural, social and economic 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.

**Storage manager** – 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** – Transfer of a seasonal allocation.

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

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

**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 flows** – Natural streamflows that cannot be captured in major reservoirs or storages.

**Victorian Environmental Water Holder (VEWH)** – An independent statutory body responsible for holding and managing Victorian environmental water 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 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.

**Waterways** – Rivers, wetlands, creeks, floodplains, estuaries and other bodies of water.

## 6.3 Contact details

For further information about the *Seasonal Watering Plan 2017–18*, please contact the Victorian Environmental Water Holder.

### **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  
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 Catchment Management Authority**

64 Dennis Street, Colac, Victoria 3250  
PO Box 159, Colac, Victoria 3250  
(03) 5232 9100  
info@ccma.vic.gov.au  
www.ccma.vic.gov.au

### **East Gippsland Catchment Management Authority**

574 Main Street, Bairnsdale, Victoria 3875  
PO Box 1012, Bairnsdale, Victoria 3875  
(03) 5152 0600  
egcma@egcma.com.au  
www.egcma.com.au

### **Glenelg Hopkins Catchment Management Authority**

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 Catchment Management Authority**

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 Catchment Management Authority**

DPI Complex, Corner Koorlong Avenue and Eleventh Street, Irymple, Victoria 3498  
PO Box 5017, Mildura, Victoria 3502  
(03) 5051 4377  
reception@malleecma.com.au  
www.malleecma.vic.gov.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  
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  
westgippy@wgcm.vic.gov.au  
www.wgcm.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  
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  
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  
www.environment.gov.au/water/cewo



Front cover:

*Top left: Coastal saltmarsh, Hospital Swamps, by Saul Vermeeren*

*Top right: Australasian bittern, by Andrew Silcocks*

*Centre: Neds Corner watering, by Mallee CMA*

*Bottom left: Canoeing at Lake Carpul, by Mallee CMA*

*Bottom right: Growling grass frog, by East Gippsland CMA*

Back cover:

*Top left: Magpie geese at Black Swamp, by Goulburn Broken CMA*

*Centre: Early stages of environmental water delivery at Nyah Floodplain, by Mallee CMA*

*Bottom left: Dragonfly at Moodie Swamp, by Fiona Lloyd*

*Bottom right: Birdwatching at Hattah Lakes, by Mallee CMA*

Inside front cover:

*White-faced heron, by Andrew Silcocks*

Inside back cover:

*Brolga, Johnson Swamp, by Damien Cook*