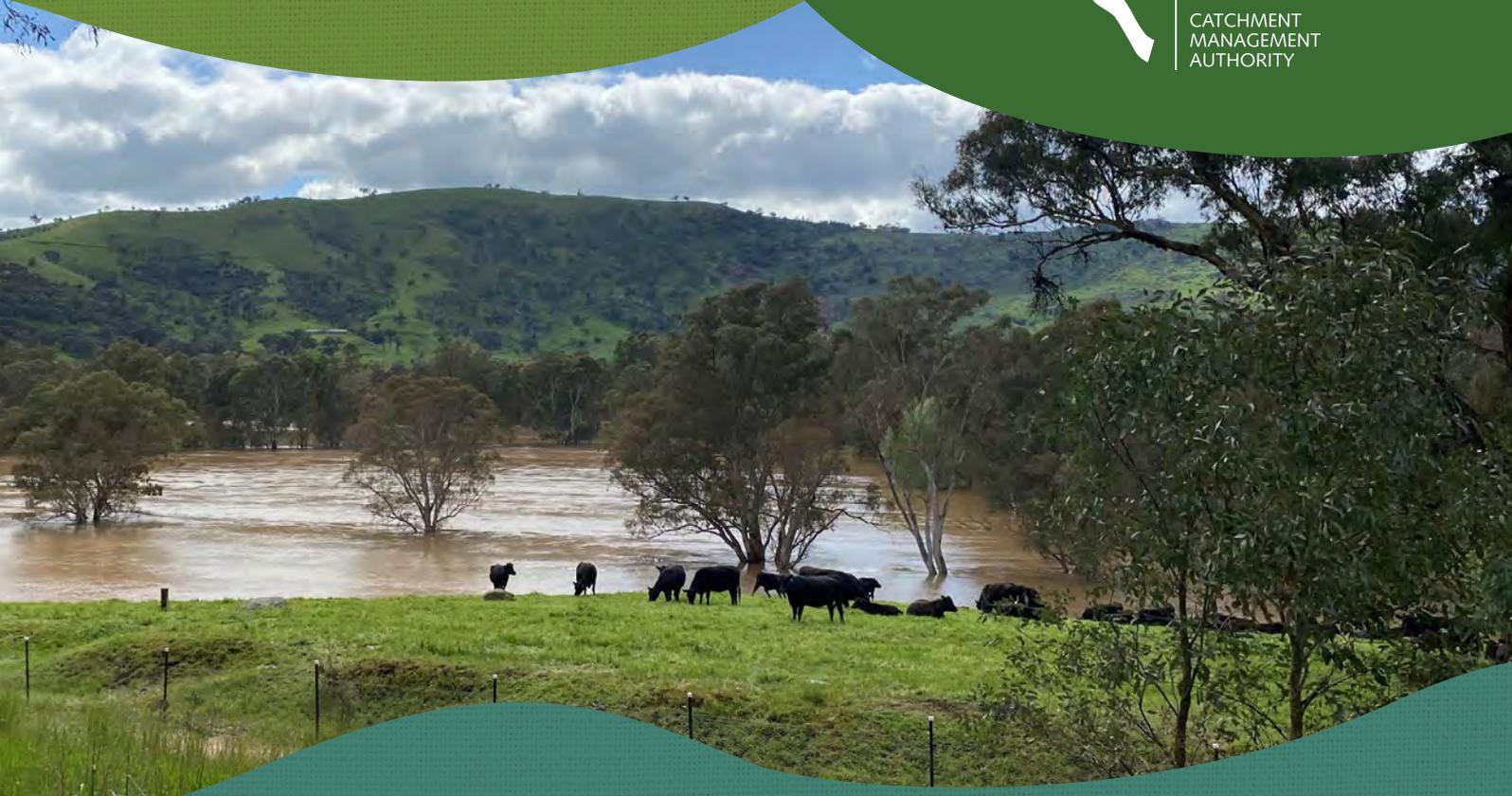




**GOULBURN  
BROKEN**

CATCHMENT  
MANAGEMENT  
AUTHORITY



GOULBURN BROKEN  
CATCHMENT MANAGEMENT AUTHORITY

# Annual Report 2022-23



# RATINGS LEGEND

Catchment condition and performance ratings are featured throughout the Annual Report. The legend can be used to interpret the allocated ratings.

2022-23 performance	Well below target (less than 50%)	Below target (50 to 80%)	On target (80 to 110%)	Exceeded target (more than 110%)	
Catchment condition	 Very poor	 Poor	 Satisfactory	 Good to excellent	
Contribution to system function	 Very poor	 Poor	 Satisfactory	 Good to excellent	
Risk to system thresholds / tipping point - Trend 2020-23	 Increasing significantly	 Increasing	 Stable	 Declining	
Long-term strategy maturity	Early	Middle	Late	Watch and adapt	Escalated response

The Goulburn Broken CMA continues to develop its approach to catchment condition and performance reporting using a resilience model aligned to the Goulburn Broken Regional Catchment Strategy 2021-2027.

Appendix 1 discusses why and how ratings are applied. Although annual performance indicators have high certainty relative to long-term indicators, the uncertainty in setting and monitoring annual targets is still significant because of irregular timing of projects and project-delivery adaptation throughout the financial year. This uncertainty is reflected in an assessment of delivering 'on target' being defined as a large range.

The Goulburn Broken CMA is committed to utilising the State-wide Catchment Indicators as developed through the Regional Catchment Strategy renewal.

## ABOUT THIS REPORT

This report provides information on the Goulburn Broken Catchment Management Authority's (CMA) performance and finances, which can be assessed against its 2022-23 Corporate Plan targets.

The Goulburn Broken Catchment's resilience is explicitly assessed to inform an adaptive approach, consistent with the Goulburn Broken Regional Catchment Strategy 2021-2027.

The Goulburn Broken CMA aims to provide information which is relevant, easily accessed and understood. More detailed and scientific data can be accessed via the website [www.gbcm.vic.gov.au](http://www.gbcm.vic.gov.au).

This report is prepared in accordance with all relevant Victorian legislation. This includes the requirement under the *Catchment and Land Protection Act 1994* for the Goulburn Broken CMA to submit '... a report on the condition and management of land and water resources in its region and the carrying out of its functions'.

Design and print complies with Department of Treasury and Finance Reporting Direction 30, which aims to achieve consistency and minimise costs and environmental impact across government agencies.

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### Front cover

#### Main photo:

Floodwater on the Goulburn River Floodplain Trawool, October 2022.

#### Inset photos (from left to right):

1. Biik Cultural Land Management willow control project, Mt Stirling.
2. The Peron's Tree Frog featured in the Goulburn Broken CMA 2022 Year of the Frog community awareness campaign (Photo Chris Tzaros).
3. Community tree planting day, Hildene.
4. Large adult trout cod in Seven Creeks, upstream of Euroa (Photo ARI).



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Recognising major NRM contributions – Janet Hagen

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## Chair's report



I am pleased to present the Goulburn Broken Catchment Management Authority's 2022-23 Annual Report.

This year we marked our 25th year as a Catchment Management Authority and commenced, with partners and community, the implementation of the renewed resilience based Regional

Catchment Strategy, a six year guiding document for landscape and community health.

The underpinning resilience of the Goulburn Broken landscape and its people was well and truly tested when a major flood hit the region in October.

The Goulburn Broken Catchment Management Authority (CMA) pivoted to support the flood response providing information to the community, through public meetings and our online flood portal, and in the Incident Control Centre, to help individuals and emergency services prepare and respond. We continue to support catchment recovery efforts and participate in reviews.

Goulburn Broken CMA supports the Victorian Government's self-determination initiatives and is continuing to explore and trial with First Nations organisations, new opportunities and approaches to increase the participation in, and lead role, of First Nations people in land and water management. We continue to work in partnership with the Catchment's two Registered Aboriginal Parties – Taungurung Land and Waters Council and Yorta Yorta Nation Aboriginal Corporation to improve country health.

Goulburn Broken CMA takes seriously our lead role in supporting Integrated Catchment Management – the coordinated management of land, water and biodiversity resources based on rivers water catchment areas. We work closely with and bring together partners, stakeholders and community to collectively address the challenges our environment and communities face. Underpinning this integrated approach is a Partnership Agreement, and we were delighted this year to have 38 organisations recommit to a shared and collaborative approach. The renewed Goulburn Broken Catchment Partnership Agreement 2023-2027 describes the shared commitment to protect and improve the health of the Goulburn Broken catchment. It provides a framework that facilitates the ongoing partnerships required to achieve resilient landscapes and thriving communities in the Catchment.

In addition to the overarching Regional Catchment Strategy, the CMA supports the development and delivery of a range of sub-strategies. The Shepparton Irrigation Region Land and Water Management Plan (SIRLWMP) has been in place for more than 30 years and is Victoria's longest running community plan, developed in response to serious threats from salinity and waterlogging. This enduring plan is a credit to the community members and the irrigation district and has underpinned extensive investment in the natural assets of the area. It is now moving to the next 30 years with planning well advanced. We are proud to have been involved over the course of the plan and look forward to our continued role in leading the renewal and supporting the priorities within.

As always water is a considerable component of our work, both the delivery of our waterway management and environmental water programs and our input and advice into government policy and initiatives. We have worked closely with the catchment community and the Victorian Government on issues related to the Basin Plan this year and will continue to provide a strong voice for our catchment and community at this critical juncture in the plan.

We also raised issues and were a voice for a range of matters important to our catchment's health and community. This has included matters relating to Victorian and Australian Government initiatives such as the Basin Plan, Biodiversity and nature repair and federal approaches to agriculture, carbon, climate change and drought.

We were pleased this year to set ourselves an ambitious target to be carbon neutral by 2025.

While there is some funding uncertainty, with Australian and Victorian Government funding cycles both due for renewal, I am confident that the important work of the CMA, as described in this Annual Report will continue to be delivered to the high standard our staff continually reach.

### Thank you

I will not be continuing as Chair after October, following seven years on the Board and 11 years on the Shepparton Irrigation Region People and Planning Integration Committee, but will no doubt continue to participate in the many activities and consultative opportunities the Goulburn Broken CMA provides.

I wish to thank my fellow Directors for their commitment and contribution to the governance of Goulburn Broken CMA. I particularly thank departing Director Ron Harris for his six years of service to the Board.

The many achievements outlined in this annual report demonstrate the excellent work of our staff and leadership of Chief Executive Officer Chris Cumming.

### Responsible Body Declaration

In accordance with the *Financial Management Act 1994*, I am pleased to present the Goulburn Broken Catchment Management Authority Annual Report for the year ending 30 June 2022.

Helen Reynolds

### Chair

Goulburn Broken Catchment Management Authority  
29 August 2023

## Chief Executive Officer's report



Goulburn Broken CMA has delivered another full year of planned and responsive activities, with nature handing our region a major flood in October requiring a realignment of focus to support the response, the recovery and the many post event reviews.

Rainfall in excess of 150 mm was widespread across the Goulburn Broken catchment during 13-14

October 2022 with isolated pockets of more than 200 mm. This resulted in extensive, and in some cases record breaking flooding that lasted for weeks. Some areas of our catchment stood up well to the onslaught with other areas and communities severely impacted.

Significant impact was felt directly in Seymour, Murchison, Mooroopna, Shepparton and Barmah and on the floodplain including in rivers and on farms.

Goulburn Broken CMA staff were outstanding in response as they worked tirelessly to bring information to the community to help them prepare. We had teams in the Incident Control Centre, at community meetings and behind the scenes ensuring the flow of data and information.

We were successful in bringing in \$3.4 million to support flood recovery and preparedness efforts and have also supported councils in successful applications for additional flood studies.

Significant work was put into river and stream assessments and further funding applications developed to repair environmental damage. Important recovery work has been prioritised and is an important focus for the area however, delivery will be constrained by funding availability.

As always there are many learnings from a flood event with live data now feeding into flood study calibration and many reviews to participate in.

Coincidentally our Floodplain Management Strategy was reviewed this year and we have contributed to the renewal of the Victorian Waterway Management Strategy.

The Regional Catchment Strategy 2021-27 (RCS) is in full implementation mode with key project activities including establishment of RCS project governance and monitoring protocols with partners; release of seed funding for collaborative, innovative projects; round table workshops for Land health and Biodiversity themes, to support a collaborative approach to address changing catchment conditions with development of innovative project concepts.

The delivery of our Victorian Government funded onground programs continued through the Sustainable Irrigation program in protecting the irrigated landscape, the River Health program in protecting and improving our rivers, streams and wetlands, and in Floodplain management. Additionally, we have delivered for the state, projects contributing to Biodiversity 2037 and climate change initiatives.

This year the team and our many partners such as Landcare, Traditional Owners and community organisations wrapped up the successful delivery of five years of agricultural and environmental projects funded under the Australian Government's National Landcare Program. Projects included

the recovery of species identified under the Threatened Species Strategy (Mountain Pygmy-possum, Silver Gum), protecting threatened ecological communities (Grey Box Grassy Woodlands) and reducing threats to our globally important wetlands (Barmah Forest Ramsar site). The From the Ground Up Project improved on-farm soil, biodiversity and vegetation. The Goulburn Broken CMA's successful 2022 Year of the Frog community awareness campaign was also delivered through this program.

We await news on our bid to deliver the next five years of Australian Government funding and have also commenced preparations for the renewal of Victorian Government funding programs in 2024.

We continued to strengthen our relationship with the region's two First Nations Registered Aboriginal Parties – Taungurung Land and Waters Council and Yorta Yorta Nation Aboriginal Corporation. Our organisations work side by side in design and delivery of many projects, and we continue to trial new ways of delivery, consistent with the Victorian Government's self-determination strategy.

We are involved in trial initiatives associated with the 'Water is Life: Traditional Owner Access to Water Roadmap' and the 'Victorian Traditional Owner Cultural Landscapes Strategy'. Our work in the Goulburn River and Barmah Forest (and beyond) responded to a range of guiding documents such as Country Plans and the Joint Management Plan for Barmah National Park.

This year our innovation efforts have focused on matters important to our community and we have delivered a range of carbon, climate, water futures and circular economy pilots in response.

Our program delivery is supported by our talented corporate team who continue to improve internal processes to create efficiencies in our business operations.

Thank you to all our partners, community groups, volunteers and land managers who continue to collectively help care for our patch. We are all more effective together.

Thank you to the CMA staff who are committed to our catchment's health. They remain resilient, flexible and innovative, and are always passionate to make a difference.

Lastly, I would like to acknowledge the Goulburn Broken CMA board for their guidance, support and shared aspirations for the health of the catchment and acknowledge the tireless support of our Chair Helen Reynolds in my first three years with the CMA.

Chris Cumming  
**Chief Executive Officer**

## Goulburn Broken profile

### Goulburn Broken Catchment Management Authority

#### Powers and duties

Goulburn Broken Catchment Management Authority (CMA) is a Statutory Authority established by the Victorian Parliament in 1997 under the *Catchment and Land Protection Act 1994*.

The responsible Ministers for the period from 1 July 2022 to 4 December 2022 were the Hon Harriet Shing MP, Minister for Water and Hon Lily D'Ambrosio MP, Minister for Environment & Climate Action.

The responsible Ministers for the period from 5 December 2022 to 30 June 2023 were the Hon Harriet Shing MP, Minister for Water and the Hon Ingrid Stitt MP, Minister for Environment.

(See page 143 for names of all persons who were responsible during 2022-23).

Goulburn Broken CMA develops and coordinates the Goulburn Broken Regional Catchment Strategy implementation by working with the community, all tiers of government and research and funding organisations. The Goulburn Broken Regional Catchment Strategy sets out the framework for coordinating land, water and biodiversity management in the Catchment.

Goulburn Broken CMA focuses on private land mostly managed for agriculture, on the interface of private and public land and supports Crown land managers with their functions.

Goulburn Broken CMA's role in water is described under the *Water Act 1989* and is to:

- be the caretaker of river health, including managing the environment's right to water (managing the environmental water reserve) and implementing works on waterways via its operational arm
- provide waterway, regional drainage and floodplain management services.

Water storage, delivery and drainage systems are managed by partner agency Goulburn-Murray Water. Urban water and wastewater services are provided by another partner agency, Goulburn Valley Water.

See the 'Governance' section (page 96) for details.

#### Funding and staff

Goulburn Broken CMA's income for 2022-23 was \$19.6 million, derived from the Victorian and Australian Governments, regional sources and other government entities.

As at 30 June 2023, 54.9 (full-time-equivalent) staff were directly employed. See the 'Human resources' section (page 88) for details.

**Goulburn Broken CMA acknowledges the Traditional Owners of land in the Goulburn Broken catchment and strongly respects the rich culture and intrinsic connection Traditional Owners have to the land.**

#### Our Vision

Resilient landscapes, thriving communities.

#### Our Purpose

Through its leadership and partnerships Goulburn Broken CMA will improve the resilience of the Catchment's people, land, biodiversity and water resources in a rapidly changing environment.

#### Our values and behaviours

**Environmental sustainability:** we will passionately contribute to improving the environmental health of our catchment.

**Safety:** we vigorously protect and look out for the safety and wellbeing of ourselves, our colleagues and our workers.

**Partnerships:** we focus on teamwork and collaboration across our organisation to develop strategic alliances with partners and the regional community.

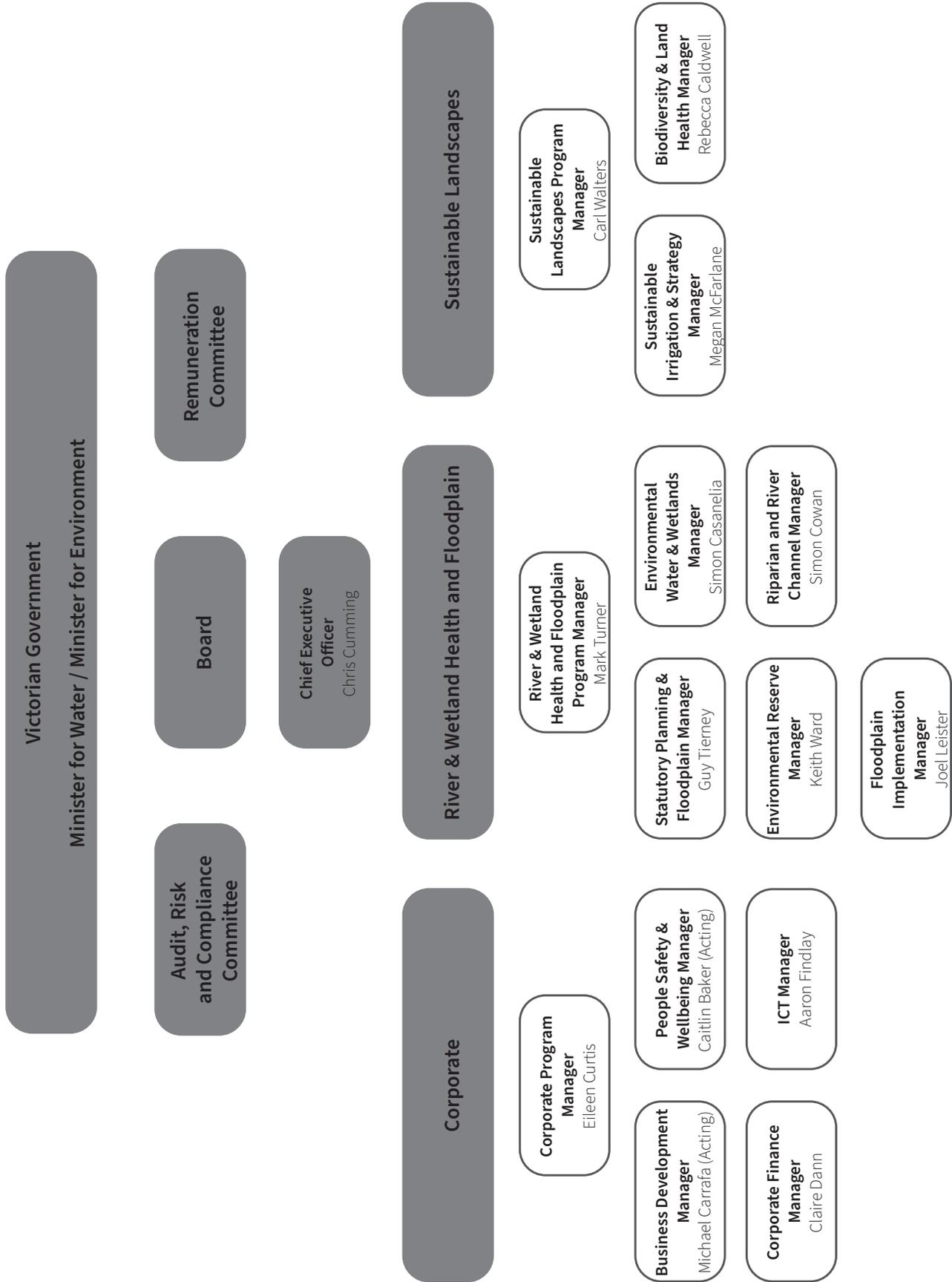
**Leadership:** we have the courage to lead change and accept the responsibility to inspire and deliver positive change.

**Respect:** we embrace diversity and treat everyone with fairness, respect, openness and honesty.

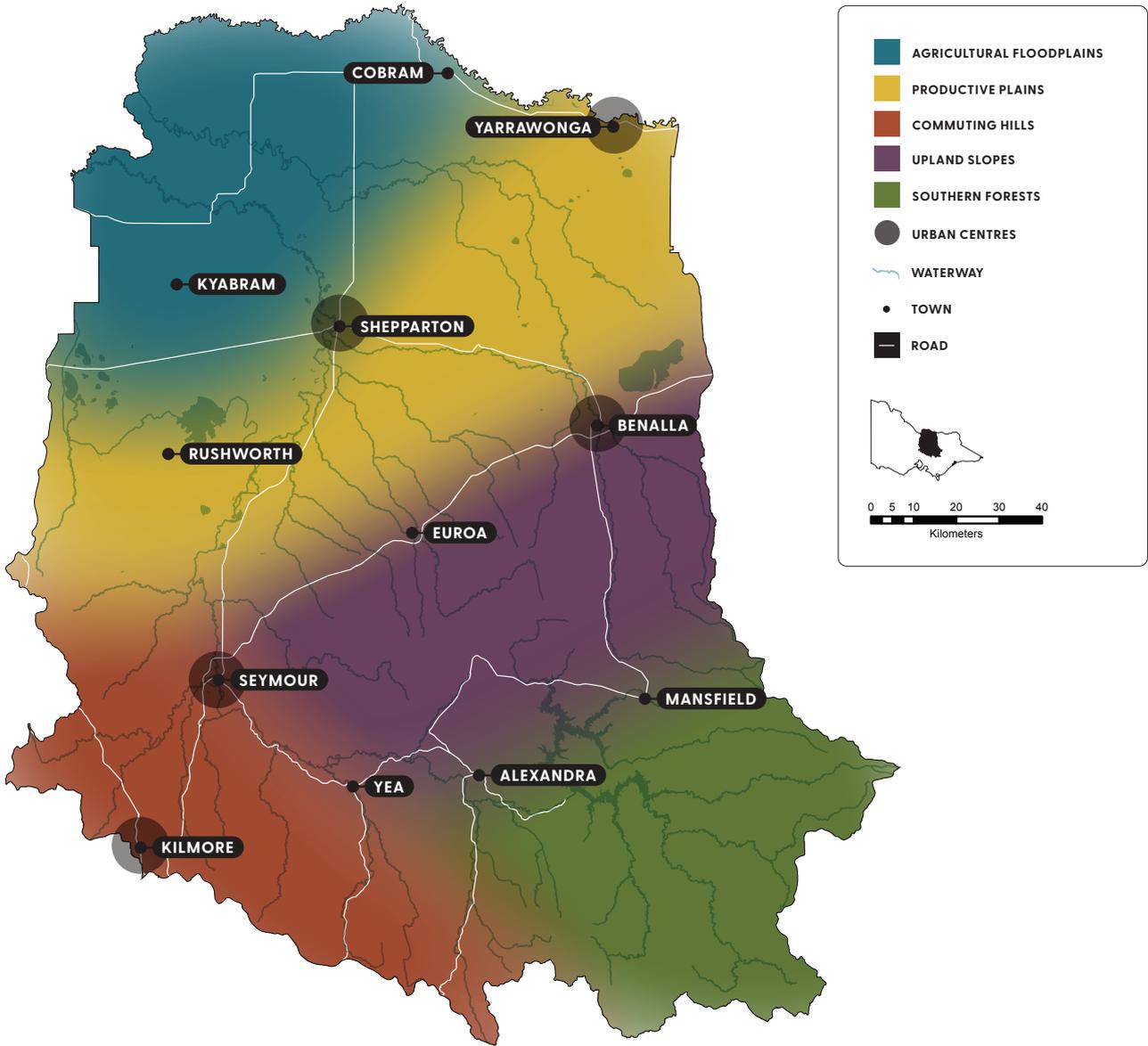
**Achievement, excellence and accountability:** we do what we say we will do, we do it well and we take responsibility and accountability for our actions.

**Continuous learning, innovation and improvement:** we are an evidence and science-based organisation and we test and challenge the status quo. We learn from our successes and failures and we are continually adapting using internal and external feedback from stakeholders and the environment. We are an agile, flexible and responsive organisation.

# Goulburn Broken CMA business structure



# Goulburn Broken catchment <sup>i,ii</sup>



i. Goulburn Broken CMA Sustainable Irrigation Program oversees delivery in part of the North Central Catchment as well as the Goulburn Broken catchment.  
 ii. Maps of the Catchment showing onground works sites and whole farm plans achieved are included as Appendix 3 and 5..

## Regional overview

The Goulburn Broken catchment is situated in Victoria and is part of the Murray-Darling Basin. It encompasses the valleys of the Goulburn and Broken rivers and part of the Murray Valley, covering 10.5 per cent of Victoria. The catchment stretches from close to the outskirts of greater Melbourne in the south, to the Murray River in the north, Mt Buller to the east and the Mt Camel Range to the west.

The catchment includes two Registered Aboriginal Parties representing the interests of Traditional Owners for their respective Country: Yorta Yorta Nation Aboriginal Corporation (YYNAC) and Taungurung Land and Waters Council (TLaWC). This includes active involvement in Natural Resource Management through joint management agreements and legislative rights to public land.

Land use is diverse across the catchment, with approximately 63 per cent managed for agricultural production and the remaining 37 per cent a mix of nature conservation, forestry, rural residential and urban (ABARES 2020). The catchment's natural resources, mild climate, proximity to Melbourne and major transport routes support major agricultural, forestry and tourism industries. They also make it an attractive place to live for the expanding rural lifestyle population.

### Upland Slopes

***Vision: The Upland Slopes is a climate resilient socio-ecological system, supported by a strong sense of place and pride in our engaged, knowledgeable and adaptive community.***

The Upland Slopes extend across the southern hills and valleys of the catchment. The Taungurung were the first people of the rivers, valleys and mountains in this region and the many cultural sites indicate the importance to Traditional Owners.

Forests originally covered the hills and the valleys were open grassy woodlands. More recently, the area has been dominated by agricultural land and lifestyle properties. Natural events, such as drought and bushfires have also shaped the landscape.

Although grouped as one local area, the Upland Slopes could be separated into two ecological areas of the upper woodlands and the lower grasslands.

Similarly, the community is not homogeneous. It would identify as three social groups: the Mansfield area, the Strathbogie Ranges and the area north of Lake Nillahcootie. The area includes the towns and districts of Yea, Strathbogie, Mansfield, Warrenbayne, Alexandra and Jamieson. The community accesses services in Euroa and Benalla, which are outside the local area.

Land use is a mixture of state forests, small reserves, lifestyle properties and agriculture in the cleared valleys and slopes. Agricultural practices are dominated by grazing with some intensive agriculture such as viticulture and irrigated agriculture along waterways. Land use is changing with the introduction of different crops, such as cherries, and the growth in lifestyle properties, particularly in the Strathbogie Ranges and around the larger towns.

## Drivers of change

Drivers of change are forces that influence how the catchment operates and shape future pathways. The major drivers of change impacting Natural Resource Management (NRM) across the region are listed below. Climate change is the most significant driver of change because it impacts all the other drivers and trends.

- Climate change
- Technological innovation
- Transition to services economy
- Ageing population
- Increasing and competing priorities for public resources
- Increasing role and recognition of Traditional Owners and First Nations People
- Water as a tradeable commodity

## Catchment trends

As a result of the drivers, a number of trends or changes are emerging at the catchment-scale for NRM. Four broad catchment trends were identified by the community and are listed below.

- Agriculture is changing
- Biodiversity is under pressure
- Water issues are more prominent and complex
- Urban population and land use is changing

### Urban Centres

***Vision: Urban Centres offer employment, facilities and services for residents while valuing the natural environment.***

Urban Centres are the smallest sub-catchment system by area, but contain the largest populations. They are defined by a concentration of people, services and industries. The major urban centres are Shepparton, Seymour, Benalla, Kilmore and Yarrawonga.

The catchment's abundant food and water resources were first enjoyed by the Yorta Yorta and Taungurung Clans and the many cultural sites in urban areas indicate the area's importance to Traditional Owners.

The population living in urban centres has increased by 50 per cent since 1981, with 74 per cent of the total catchment population now living in a town, and a further 17 per cent living in the urban fringe and dependent on towns for employment.

The growth has not been consistent across all towns with variation influenced by factors such as town size, planning constraints, proximity to water or hills, proximity to facilities and employment, dependence on industries with declining or growing employment and bushfires.

Towns are valued for the range of services and opportunities they offer such as employment, education, support, infrastructure, retail, healthcare and sporting.

Urban communities are very diverse and connected by employment, sport and social groups, but may not be strongly connected to the natural environment. This connection is changing with developments capitalising on the natural environment and a growing number of people enjoying nature-based recreation.

## Agricultural Floodplains

**Vision: The Agricultural Floodplains community leads Australia in producing food in harmony with the environment.**

The Agricultural Floodplains encompass the Shepparton Irrigation Region and the north-eastern parts of the catchment to the Murray River. It includes the towns of Shepparton, Cobram, Nathalia, Yarrawonga, Tatura, Kyabram, Tongala and Numurkah.

The region has a rich Aboriginal heritage and a First Nations population of more than 6000, the largest in regional Victoria.

Yorta Yorta Nation Aboriginal Corporation, which includes eight clans, has statutory responsibilities for managing traditional cultural heritage and Crown land in Yorta Yorta Country. The balance of the area to the west is under the umbrella of the Taungurung Land and Waters Council.

The arrival of Europeans in the mid-1800s, soldier settlement schemes and more recent international migrants have added to a culturally diverse community.

The changing land use has included clearing for dryland and irrigation farming, construction of irrigation and drainage networks and urban settlement. These have seriously impacted the area's biodiversity, with most of the remaining habitat and vegetation along waterways and roadsides.

## Productive Plains

**Vision: Through strong, supportive community networks, the Productive Plains balances land productivity, quality water access and native vegetation quantity and condition in a changing climate.**

The Productive Plains run across the lower slopes and plains of the central catchment and include the towns of Nagambie, Euroa, Violet Town, Dookie and Tungamah. The area's abundant food and water resources were first used by the Yorta Yorta and Taungurung Clans and the many cultural sites indicate its importance to Traditional Owners.

Since European settlement, land use has included clearing for farming, gold rushes, the post-1930s farm mechanisation boom and the 1950s wool boom. This changing land use has had a major impact on the area's biodiversity. Most of the remaining habitat is provided by vegetation along waterways, roadsides, ranges and spring soak wetlands.

While rivers and creeks remain unregulated (except the Goulburn and Broken rivers), they are only in moderate condition. Community networks, such as the Gecko CLaN, Longwood Plains Conservation Management Network and many others, have established and provided support to landholders over the past 20-30 years to adopt sustainable farming practices and protect threatened species.

Growing consumer demand for greener agricultural products and the increasing sense of urgency among the community for climate change action, has the potential to create new opportunities for NRM across the Productive Plains.

## Commuting Hills

**Vision: The Commuting Hills has a safe, sustainable future and a great quality of life, while protecting and enhancing the wonderful natural environment.**

The Commuting Hills feature the mountainous urban fringe of the southern and south-western area of the catchment.

Traditional Owners originally shaped the land and the many cultural sites indicate the importance of the area. European settlement later led to the clearing of land for agriculture, gold rushes, urban development and rail and road infrastructure.

Large tracts of public land and small privately owned forested land remain over much of the area. Public land use includes extensive native forests, recreation and production forestry. Private land use is typically for lifestyle properties, intensive agriculture (such as berry farming and aquaculture) and grazing on cleared valleys and slopes.

## Southern Forests

**Vision: With the community, the Southern Forests balances ecological, economic, cultural and recreation needs to preserve natural resource health.**

The Southern Forests local area in the catchment's south and south-east includes seasonally snow-covered alps, moist montane and sclerophyll forests.

The Taungurung were the first people of this area and have ongoing land management responsibilities through the Recognition and Settlement Agreement between the Taungurung Land and Waters Council Aboriginal Corporation, the Taungurung Traditional Owner group, and the Victorian Government.

Public land is managed as state forest, alpine resorts and national or state parks by Taungurung Land and Waters Council, Parks Victoria, Department of Energy, Environment and Climate Action and Alpine Resorts Victoria.

This public land has the largest intact native vegetation areas in the catchment.

Over the past 100 years, the area has been shaped by events such as bushfires, gold rushes and post-war timber industry development. In recent years, the concentration of timber mills has fallen, while tourism demands have increased.

The natural resources are used for forest reserve, recreation, tourism, hydropower, water capture and storage and production forestry, including native forests and plantations. These require supporting infrastructure including roads and telecommunication.

The forest landscapes are highly valued for their ecological extent and diversity, cultural significance and economic contribution from recreation, tourism, plantation and native forest timber harvesting. Soils are fragile and often on steep slopes. The ecosystem services include high-quality and reliable water that provide environmental, economic and social value.

## Key events 2022

### July

On 1 July, Catchment Management Authorities across Victoria marked 25 years since inception. Goulburn Broken CMA will celebrate its 25th year by highlighting the contribution of long-serving volunteers and two 25-year employees.

A winter fresh was delivered down the Goulburn River to improve habitat and food sources for native fish, platypus and water bugs. Information on when off-channel habitats between Eildon and Seymour connect to the river was collected and used to refine flow recommendations for this section of the river.

Goulburn Broken CMA shared a stand with the Goulburn Murray Landcare Network and RiverConnect at the Dharnya Day celebrations in Barmah National Park, providing an excellent opportunity to celebrate NAIDOC Week with Yorta Yorta people and Traditional Owners.

The Waranga Community Landcare Co-operative received approval to become a new Landcare Group.

### August

Goulburn Broken CMA received funding for the Swift Parrot Pantry Project from the Australian Government Environment Recovery Fund. The project will address the threat of habitat and nectar loss by planting habitat and food source trees and improve habitat condition. A project field day was held at the Killawarra Forest with BirdLife Australia where the critically endangered Swift Parrots were sighted.

The Goulburn Murray Water leadership group met with the new Murray-Darling Basin Authority CEO and had discussions with new Victorian Minister for Water Harriet Shing.

Environmental water was delivered to Horseshoe Lagoon. The delivery was managed by Taungurung Land and Waters Council.

The National Irrigators Council held its AGM in Nagambie and visited a dairy farm to talk about water management.

### September

The Follow the Flowers project is working with the Goulburn Broken CMA and Agriculture Victoria to help Rumbalara Aboriginal Cooperative undertake a whole farm plan to assess the most efficient way to irrigate their property at Ardmona. The Follow the Flowers project featured on Network 10's The Project in July.

A farm dam workshop was held at Rushworth focusing on farm dam management, teal carbon and biodiverse farm dams.

The 'Green Passport' project was launched, a collaboration between Goulburn Broken CMA, Goulburn Valley Health and Goulburn Broken Community Leadership which aims to connect people with nature for mental health and wellbeing benefits.

### October

The region faced an emergency flood situation in mid-October with record peaks of the Goulburn River and many other catchment waterways. Goulburn Broken CMA staff contributed to the flood response supporting flood intelligence in the Incident Control Centre.

Floodplain staff attended numerous community flood response and recovery meetings held throughout the catchment, to support public understanding of flood impacts.

Floodwater generated hypoxic blackwater in the Broken Creek and lower Goulburn River, resulting in native fish deaths in the lower Broken Creek. In response, Goulburn Broken CMA coordinated the delivery of water from outfalls along the lower Broken Creek and lower Goulburn River when floodwater receded to provide water quality refuges for native fish.

Victorian Water Minister Harriet Shing visited the Benalla office in the wake of the floods, speaking to staff, looking at flood photos and viewing the Goulburn Broken Community Flood Intelligence Portal.

People, Safety & Wellbeing staff were recognised for their efforts in Occupational Health & Safety in the Goulburn Valley Safety Group awards, winning one award and being a finalist in another.

Goulburn Broken CMA welcomed a Business Administration Trainee and will host this role for 12 months.

### November

Flood response works began across the catchment, undertaken by Goulburn Broken CMA River Health and Sustainable Irrigation Program (SIP) teams. The SIP works focused on drainage and salinity and flood recovery.

Goulburn Broken CMA's 'The Mammal Book' was launched, focusing on the mammal species in the Grey Box Grassy Woodlands as part of the Australian Government's Regional Land Partnerships project.

The first Goulburn Broken Regional Catchment Strategy round table Biodiversity workshop was held in Nagambie. Participants discussed catchment condition and changes, with consideration to future biodiversity challenges and opportunities.

Natural flooding of Barmah Forest in spring stimulated a large waterbird breeding event and excellent growth and flowering of Moira grass.

### December

The highly successful 2022 Goulburn Broken CMA Year of the Frog community awareness campaign came to an end. It generated 56 media articles/promotional articles/radio interviews, four community workshops with 160 attendees, collaboration with six stakeholders and the production of six QR-coded frog posters playing frog call sounds when scanned.

Production and distribution of 4000 copies of the 2023 Goulburn Broken Catchment calendar.

Unseasonal snowfall on Mt Buller cut short manual weeding of alpine bogs/drainage lines and Bogong moth monitoring as part of the Mending Mountains for Pygmy-possum project.

## Key events 2023

### January

Goulburn Broken CMA responded to the Australian Government's Approach to Market to be a delivery partner for the Regional Land Partnerships program and implement environmental protection, sustainable agriculture, and natural resource management services for the Goulburn Broken region.

A 'catchment critter' was chosen for every month of the year as part of the Goulburn Broken CMA 'Catchment Critters' community awareness campaign. A media release was distributed and published by an average of eight catchment newspapers (print and online) each month. ABC radio interviews also resulted from the campaign.

### February

Goulburn Broken CMA had a stall at the Ultimate Fishing Expo in Melbourne, informing attendees about the waterway activities we undertake.

Staff attended the 'Right Plant Right Way' workshop at Mildura, which aimed to build partnerships with First Nations and scale up supply of plants and seed to meet current demand in biodiversity restoration and carbon projects across the state.

A cultural heritage survey was undertaken on a private land site at Yelima by the Yorta Yorta Cultural Heritage team as part of the Swift Parrot project. Several significant sites were identified.

Goulburn Broken CMA welcomed a Victorian Environmental Water Holder staff member on secondment for 12 months to a role with the Environmental Water team.

The Future Direction Workshop with community and stakeholders for the new Shepparton Irrigation Region Land and Water Management Plan was attended by 50 people. The Kyabram event considered regional values and future pathways for land and water in the Shepparton Irrigation Region.

### March

The Taungurung Biik Cultural Land Management works crew undertook natural resource management activities on Country at Mount Buller, including weed control, Mountain Pygmy-possum monitoring and planting 2500 plants in key Mountain Pygmy-possum habitat areas.

Arthur Rylah Institute staff undertook electrofishing surveys on six priority waterways containing threatened species Macquarie perch, to evaluate impacts on recruitment of the October floods and facilitate continuity of long-term monitoring.

Staff members attended the launch of the 2023 Fairley Leadership Program. Goulburn Broken CMA sponsors a Fairley Leadership Program participant each year through the Ken Sampson Memorial Scholarship. This year's recipient is former staff member Qader Karimi.

Staff gathered together for the annual staff workshop at Eildon.

A small fresh was delivered down the Broken River to increase habitat for native fish, platypus, water bugs and riparian vegetation. This was only the second time an autumn fresh has been delivered in the Broken River using environmental

water. To meet water demands in the Murray River, water from Goulburn Inter-Valley Trade account was delivered as a pulse down the lower Goulburn River with a peak magnitude of 3000 ML/day in accordance with the new operating rules.

### April

A circular economy workshop was held in Shepparton with about 25 participants.

A Sustainable Agriculture Showcase was held at Dookie, with presentations of research findings from delivery partners of the 'From the Ground Up' projects.

As part of the Australian Government-funded Carbon+Biodiversity pilot, an online presentation for participants and community provided insight into environmental markets and landholder learnings.

Results from threatened fish surveys undertaken by Arthur Rylah Institute researchers suggest populations of threatened fish in flood impacted waterways - Seven Creeks, Hughes Creek and King Parrot Creek have fared better than expected in response to flood impacts. In Seven Creeks, populations of Trout Cod and Macquarie Perch were found to be higher than the previous two years.

### May

Arthur Rylah Institute staff surveying waterbirds at Gaynor Swamp saw two rare occurrences in Victoria - evidence of breeding of Hardheads and Caspian Terns, both threatened species in the state. ARI is working with Goulburn Broken CMA to monitor local wetlands.

Goulburn Broken CMA participated in the Statewide Landcare Meeting in Melbourne with all statewide Regional Landcare Coordinators, Landcare Victoria Incorporated and DEECA.

A partnership project event with the Australian Trout Foundation, revegetating the Goulburn River at Kevington was held.

The Taungurung Biik Cultural Land Management works crew undertook weed control, camera monitoring of wildlife, and weed assessments at Reedy Lake near Nagambie as part of the Taking Care of Country (DEECA funded) project.

### June

Shane Monk from Taungurung Land and Waters Council and members of the Biik works crew delivered a presentation about the Mending Mountains for Pygmy Possums project to Year 9-12 Outdoor Education Students at Mansfield Secondary College.

Six seed funding projects supported through the Goulburn Broken Regional Catchment Strategy have progressively achieved milestones.

A social media campaign and the Vic Catchments Actions & Achievements Report highlighted the outcomes of CMAs over the past 25 years.

## Regional catchment condition summary (Statewide standard format)

See Appendix 2 for Goulburn Broken CMA Approach to the Catchment Condition - Statewide Format

Theme	Trend		Condition
	2022-23	Over last 5 years	
<b>Water</b>	Concerned	Concerned	Moderate

Catchment condition for water is rated as moderate overall, with condition of waterways moderate, floodplains moderate and irrigation system poor. Trends in catchment condition for water have been largely stable over the past five years.

### **Waterways**

In 2022, river inflow volumes reached their second highest levels since 2000; a 72.5 per cent increase from 2021.

The removal of stock-grazing and key fish-barriers in conjunction with the resnagging of streams, tree planting, wastewater management and the delivery of environmental water, has resulted in an improvement in overall river health. Blue green algae, hypoxic blackwater events and pH levels are however increasing.

Significant erosion and channel change in some mid to upper catchments was caused by the 2022 floods, such as in Hughes Creek and Goulburn River tributaries upstream of Seymour. Riparian vegetation and instream habitats in areas where vegetation is lacking was also impacted more severely by the floods, and there is good evidence that resilience to bank erosion was greater where there is increased presence of riparian vegetation.

Available water for the environment is being used to protect and improve the health and functioning of some waterways.

Increasing pressure from recreation and other land uses can also impact on the health of waterways. Waterways face ongoing pressure from urbanisation, particularly in the south of the Catchment.

Traditional Owner input and inclusion of biocultural knowledge is increasingly influencing waterway management, with local and regional agency and broader community partnerships also strengthening the management of waterways.

### **Floodplain management**

There have been significant floodplain management improvements across the Catchment, with further improvements currently underway.

Flood impacts potentially increase through the introduction of more infrastructure on floodplains, however through floodplain management tools, the annual average damages do not unduly increase and community preparedness and education of flood risk improves.

The 2022 floods tested flood study outputs and planning decisions and also triggered numerous reviews and increased the government focus on flooding.

### **Shepparton Irrigation Region**

Shepparton Irrigation Region social-ecological systems depend on highly productive and efficient irrigated agriculture. They are beyond tipping points and are adapting and transforming, creating significant uncertainty and stress.

The impacts of climate change are threatening farm and regional viability, making it challenging for the region to adapt to a future with less irrigation water.

There was an expected rise in watertables in response to recent flooding and the following wetter than expected seasons. Monitoring will continue.

Undrained catchments in the Shepparton Irrigation Region remain at risk of waterlogging and increasing salinity. Expansion of the Drainage Course Declaration program and continued adaptive management remain fundamental to meeting climate change challenges as well as actively contributing to building the region's resilience.

Recent floods and storms have had variable impacts on local businesses that rely on irrigated agriculture.

## Regional catchment condition summary (Statewide standard format) cont.

See Appendix 2 for Goulburn Broken CMA Approach to the Catchment Condition - Statewide Format

Theme	Trend		Condition
	2022-23	Over last 5 years	
<b>Land</b>	Neutral	Neutral	Moderate

Above average seasonal rainfall in 2022 (second highest since 2000 and a 28.9 per cent increase from 2021) continued to drive confidence in many agricultural sectors, however confidence has likely reduced into 2023 as model predictions of El Nino strengthened.

Good conditions persisted in many areas that were not impacted by flooding where water lay around for weeks, resulting in good ground cover and potentially more organic matter turn over. This, together with strategic investments in soil health, such as lime, support soil health for agriculture.

The above average seasonal rainfall also drove increased requirement for crop residue management, leading to industry investment in determining options that are more effective than burning (multiple outcomes).

The mean amount of moisture in soil was at its third highest in 2022 since 2000 with an increase of nine per cent since 2021.

High participation by industry in activities that demonstrate Natural Resource Management on farms suggest there is increasing recognition amongst farmers of the nexus between ecosystem services and primary production leading to more activity investigating and supporting natural capital on farms.

The area of exposed soil within the Goulburn Broken was its third lowest (in 2022) since 2000.

Visitor numbers and the use of public land for recreation is increasing, whilst subsequent management issues such as rubbish, access, illegal firewood collection also grow. Efforts to control feral grazing species such as deer also continue to increase.

The 2022 floods increased invasive plant extent in some areas. Catchment-wide invasive plant and animal management is predominately focused on new and emerging species and complementing community activity. There are increasing long-term risks in hot spot areas for species such as deer and key weed species in priority areas.

<b>Biodiversity</b>	Concerned	Concerned	Poor
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Catchment condition for biodiversity is currently rated as poor, with no significant change since 2009. The long-term risk of decline is very high. This is due to large scale historic clearing of native vegetation across the landscape and the magnitude of restoration required to stop the decline in biodiversity. Presently that effort to restore native vegetation is being thwarted by current land use decisions and poor regulatory policy. This has resulted in failure to meet no net loss principles through loss of native vegetation extent; and a reduction in diversity and quality of native vegetation across the landscape.

Good climatic conditions across the catchment have seen increased native flowering and seeding events attracting increased numbers of species (e.g. flying foxes) and driven the movement of species (e.g. superb parrot) beyond their normal range. These good climatic conditions can also result in higher pest plant numbers having a negative impact on biodiversity.

The scale of change in areas managed for conservation is not sufficient. Thresholds have been breached and many flora and fauna ecosystems are in decline. Where resources have been invested, results have been positive, including for the mountain pygmy possum at Mount Buller.

Urbanisation across the Catchment is a continued challenge to the Catchment's biodiversity.

Waterbird populations increased in response to the 2022 floods and environmental flows. Positive impacts have also been experienced on floodplain wetlands providing spawning and breeding opportunities for many native fauna and improved condition of wetland vegetation.

The floods of 2022 have also positively impacted biodiversity such as the watering of ecosystems, and increased vegetation abundance and attraction of birds. However the floods also had negative impacts such as the loss of plantings, fencing, and increased weeds in some areas (particularly those of lower quality).

Although there has been increased waterbird habitat in the Goulburn Broken catchment as a result of environmental flows, populations of many species across the Murray-Darling Basin appear to be declining.

Large scale restoration projects are required to increase habitat and connectivity across the Catchment and projects such as Kilter Rural's investment in the Catchment has enabled opportunity for larger scale corridor revegetation projects with 30 per cent of purchased land going to restoring native habitat. Similar opportunities for larger scale revegetation have occurred through the partnership with Winton Wetlands and the Regent Honeyeater Project.

Theme	Trend		Condition
	2022-23	Over last 5 years	
<b>Community</b>	Neutral	Neutral	Moderate

The capacity and resilience of the community is central to the Catchment's condition as community engagement in Natural Resource Management (NRM) is a major driver of biodiversity, land, and water health. Catchment condition for community capacity and resilience is rated as moderate, with a stable long-term trend.

Diverse stakeholders are represented on high-level regional and local community NRM forums. Farmers, Traditional Owners, local and regional government agencies, Landcare and recreation groups work collaboratively and are strongly networked.

There is increased land use change such as urbanisation which creates challenges, but also opportunities and risks.

Communities, partner organisations, and landholders have achieved significant on ground changes and are influencing attitudes and behaviours within Natural Resource Management.

First Nations involvement in NRM continues to increase, which is also supported by policy and legislative change.

Funding for agencies to support local community groups (including Landcare) and individuals is uncertain; volunteers are ageing and participation in government programs is dropping off for some community members due to increasing complexity. We continue to adapt to the changing nature of volunteering.

There has been increased opportunity to engage with the community as a result of increased technological competence stimulated by COVID-19.

<b>Integrated Catchment Management</b>	Positive	Neutral	Good
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The renewal of the Goulburn Broken Regional Catchment Strategy (RCS) was completed in late 2021 and endorsed by the Minister in 2022. The renewal process involved input from stakeholders including Taungurung Land and Water Council, Yorta Yorta Nation Aboriginal Corporation, government agencies, councils, groups and individuals who make up the diverse range of people that live, work, invest in and visit the Catchment.

Six innovative projects received seed funding to implement and test new approaches to improving or monitoring catchment condition.

In this first year of implementation of the RCS, Goulburn Broken CMA has also conducted round table workshops to engage with our catchment partners regarding both Land and Biodiversity themes. These events were successful in supporting collaboration to develop new project concepts and to consider catchment condition monitoring. Opportunities to capture and share data to track RCS progress for water and community themes, are currently being explored for delivery in 2023-24.

Integrated catchment management is expected to continue to strengthen with the continued implementation of the RCS and the renewed Goulburn Broken Catchment Partnership Agreement 2023-27.

## Long-term scorecard: Catchment condition and resilience

All investment areas are impacted by key catchment drivers of change such as:

- Land-use change
- Water policy reform
- Climate change
- Increased farm productivity.

Investment area <sup>i</sup>	Catchment condition summary			Snapshot
	1990	2023	Long-term risk <sup>ii</sup> (given current support)	
<b>Community</b>  	●	●	MEDIUM	<ul style="list-style-type: none"> <li>— Traditional Owners involvement in Natural Resource Management is increasing, supported by awareness, resourcing, policy and legislative change.</li> <li>— Communities, partner organisations, farmers and others have achieved significant onground changes and are influencing attitudes and behaviours within Natural Resource Management.</li> <li>— Diverse stakeholders are represented on high-level regional and local community NRM forums: farmers, Traditional Owners, local and regional government agencies, Landcare and recreation groups, and others work well in partnership and are strongly networked. Increased urbanisation continues to influence the catchment community.</li> <li>— Funding for agencies to support local community groups and individuals is uncertain, volunteers are ageing and participation in government programs is dropping off due to increasing complexity of programs and volunteer requirements. However, the level of volunteering is increasing in response to disasters (in less formal settings) e.g. 2022 floods volunteers helping within affected community.</li> <li>— There has been an increased ability to engage with parts of the community as a result of the increase in technological skill stimulated by COVID-19. There is now a transition to new ways of engaging and leading with and within the community through hybrid and face to face opportunities made possible from COVID-19 and due to demographic shifts in the community.</li> </ul>
<b>Floodplain management</b>  	●	●	MEDIUM	<ul style="list-style-type: none"> <li>— There have been significant floodplain management improvements across the catchment, with further improvements currently underway.</li> <li>— As more infrastructure occurs within floodplains, flood impacts potentially increase. However, through floodplain management tools, the annual average damages do not unduly increase and community preparedness and education of flood risk improves.</li> <li>— The influence of climate change on rainfall patterns, and therefore the flood behaviour, is being observed across the catchment. Current studies are including allowances for these changes in the project outputs.</li> <li>— The 2022 floods tested flood study outputs and planning decisions. They also assessed community preparedness and response to flooding.</li> <li>— The 2022 floods have triggered numerous reviews and increased government focus on flooding. This may lead to changes in future floodplain management.</li> </ul>

**Catchment condition:** ● Very poor    ● Poor    ● Satisfactory    ● Good to excellent

i. Investment areas apply to the whole-of-catchment, apart from Sustainable irrigation, which applies only to the Agricultural Floodplains social-ecological system (and the associated Shepparton Irrigation Region Land and Water Management Plan).

ii. Risk of systems not being in desired state of resilience in the long term given current support. The desired state is often different from the current state and is usually not the pre-European state. Investment areas can be considered as systems and they are highly interconnected. Support includes government funding and community investment.

Ratings in the following table are explained in investment area reports as referenced in the right-hand column. Ratings shown are not a definitive assessment and are a tool for discussion about long-term progress. Comments about the certainty of ratings are shown in each investment area.

Appendix 1 describes the analytical framework, including terms used in this scorecard.

Resilience assessment							Long-term strategic implementation	Details page
Critical attribute affecting long-term catchment health <sup>iii</sup>	Contribution to system function		Risk to system thresholds / tipping point					
	1990	2023	Trend 2020-23	With current support	With no support			
Community capacity to influence and lead				MEDIUM	HIGH	Escalated response <sup>iv</sup>	34	
Community capacity to be involved and act onground				MEDIUM	HIGH	Watch & adapt	34	
Flood impact				MEDIUM	VERY HIGH	Late	52-57	

**Contribution to system function:** Very poor Poor Satisfactory Good to excellent  
**Risk to system thresholds / tipping point:** Increasing significantly Increasing Stable Declining

iii. Many critical attributes relate to the 20 to 30-year objectives listed in Goulburn Broken CMA sub-strategies.  
 iv. 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.

Investment area <sup>i</sup>	Catchment condition summary			Snapshot
	1990	2023	Long-term risk <sup>ii</sup> (given current support)	

<b>Waterways</b>	<span style="color: #c00000;">●</span>	<span style="color: #008000;">●</span>	<b>MEDIUM</b>	
	<ul style="list-style-type: none"> <li>– Overall river health has improved from changes such as removal of stock grazing and key fish barriers, resnagging, tree planting, wastewater management and delivery of water for the environment. However, blue-green algae, hypoxic blackwater events and pH levels are all increasing.</li> <li>– Extreme events (e.g. flooding) and climate change continue to be a significant challenge.</li> <li>– The 2022 floods had positive impacts on floodplain wetlands providing spawning and breeding opportunities for many native fauna and improved condition of wetland vegetation. Waterbird populations and habitat have recently increased due to the floods and environmental flows, however many populations across the Murray-Darling Basin seem to be declining.</li> <li>– The 2022 floods caused significant erosion and channel change in some mid to upper catchments. Damage has occurred to riparian vegetation and instream habitat in areas where vegetation is lacking, while the presence of riparian vegetation provided resilience to banks.</li> <li>– Flood recovery works are progressing to address impacts to infrastructure, pest plants and animals, animal welfare and environmental damage.</li> <li>– Available water for the environment is protecting and improving waterway health and function. Opportunities to improve the effectiveness, e.g. delivery constraints, exist. Consumptive water also poses environmental challenges in some instances.</li> <li>– Waterways face increasing pressure from recreation and other land uses including urbanisation.</li> <li>– Traditional Owner input and inclusion of biocultural knowledge is increasing in waterway management, with local and regional agency and broader community partnerships strengthening.</li> <li>– Unauthorised activity across the catchment is affecting waterways.</li> </ul>			

<b>Biodiversity</b>	<span style="color: #c00000;">●</span>	<span style="color: #c00000;">●</span>	<b>VERY HIGH</b>	
	<ul style="list-style-type: none"> <li>– Native vegetation improvement actions, such as revegetation and stock control, have improved 0.8 per cent (12,808 ha) of the Catchment’s private land in the past ten years. After accounting for losses during this time, native vegetation extent has increased by the order of 0.3 per cent (4288 ha), which is not a sufficient scale for all native species to survive.</li> <li>– Current threats, such as clearing (including illegal firewood collection), invasive pest plants and animals, and fire management, are exacerbated by climate change and have a compounding effect on past large-scale habitat loss and degradation. Paddock trees remain vulnerable</li> <li>– There is an increased need for support to councils regarding native vegetation controls, especially retaining high quality vegetation, in development applications and farm planning.</li> <li>– Good climatic conditions have increased native flowering and seeding events, attracting increased numbers of species such as flying foxes and driven the movement of species such as Superb Parrot, beyond their normal range. These good climatic conditions can also result in higher pest plant numbers having a negative impact on biodiversity.</li> <li>– The floods of 2022 have positively impacted biodiversity (e.g. watering of ecosystems, increased vegetation abundance and attraction of birds) but also had negative impacts (e.g. loss of plantings, fencing, increased weeds in some areas).</li> <li>– The scale of change in areas managed for conservation is not sufficient. Thresholds have been breached and many flora and fauna ecosystems are in decline.</li> <li>– Urbanisation across the Catchment is a continued risk to biodiversity. Anecdotally, there has also been increased usage of areas for recreation which may be impacting biodiversity.</li> </ul>			

**Catchment condition:** ● Very poor ● Poor ● Satisfactory ● Good to excellent

i. Investment areas apply to the whole-of-catchment, apart from Sustainable irrigation, which applies only to the Agricultural Floodplains social-ecological system (and the associated Shepparton Irrigation Region Land and Water Management Plan).

ii. Risk of systems not being in desired state of resilience in the long term given current support. The desired state is often different from the current state and is usually not the pre-European state. Investment areas can be considered as systems and they are highly interconnected. Support includes government funding and community investment.

		Resilience assessment					Long-term strategic implementation	Details page
	Critical attribute affecting long-term catchment health <sup>iii</sup>	Contribution to system function		Risk to system thresholds / tipping point				
		1990	2023	Trend 2020-23	With current support	With no support		
	Streamflows and wetland inundation - Dammed (regulated) streams	●	●	—	MEDIUM	VERY HIGH	Early	40, 44
	Streamflows and wetland inundation - Undammed (unregulated) streams	●	●	▲	HIGH	VERY HIGH	Middle	41, 44
	Streamside (riparian) vegetation	●	●	▼	LOW	HIGH	Late	41, 46
	Water quality	●	●	▲	MEDIUM	HIGH	Watch & adapt	42, 46
	Fish passage and habitat	●	●	▼	LOW	MEDIUM	Late	42, 46
	Native vegetation extent <sup>v</sup>	●	●	▲	VERY HIGH	VERY HIGH	Escalated response <sup>iv</sup>	58-66
	Native vegetation quality <sup>v</sup>	●	●	▲	VERY HIGH	VERY HIGH	Escalated response <sup>iv</sup>	58-66

**Contribution to system function:** ● Very poor ● Poor ● Satisfactory ● Good to excellent  
**Risk to system thresholds / tipping point:** ▲ Increasing significantly ▲ Increasing — Stable ▼ Declining

iii. Many critical attributes relate to the 20 to 30-year objectives listed in Goulburn Broken CMA sub-strategies.

iv. 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.

v. These vegetation attributes recognise that threatened species are part of ecological systems.

Investment area <sup>i</sup>	Catchment condition summary			Snapshot
	1990	2023	Long-term risk <sup>ii</sup> (given current support)	
Land	●	●	MEDIUM	<ul style="list-style-type: none"> <li>— Good seasonal rainfall continued to drive confidence in many agricultural sectors (despite many being impacted by floods). The outcome is likely to include increased crop and pasture growth (with some local variability), resulting in good ground cover and more organic matter turn over, and strategic investments in soil health, such as lime.</li> <li>— Good seasonal rainfall also drove increased requirement for crop residue management, leading to industry investment in determining options that are better than burning (multiple outcomes).</li> <li>— Increased awareness of how soils can be improved is being applied on many farms. However, the changing demographics in the south of the catchment is affecting and changing the use of private land.</li> <li>— Visitor numbers and recreational use of public land is increasing and management issues such as rubbish, access and illegal firewood collection are increasing, along with efforts to control feral grazing species.</li> <li>— Although the 2022 floods increased invasive plant extent, catchment-wide invasive plant and animal management is now predominately focused on new and emerging species and complementing community activity. Under present arrangements, there are high and increasing long-term risks in hot-spot areas like deer and key weed species in priority areas.</li> <li>— Changes in land use continue to impact biodiversity, including peri-urban development and corporate farming.</li> <li>— There is increased complexity in managing carbon and biodiversity on-farm with demand for corporate green credentials increasing and unclear pathways for nature accounting; and increasing recognition of the nexus between ecosystem services and production, leading to more interest in supporting NRM on farms.</li> </ul>
Sustainable irrigation	●	●	HIGH	<ul style="list-style-type: none"> <li>— Shepparton Irrigation Region (SIR) social-ecological systems depend on highly productive and efficient irrigated agriculture. Some systems are beyond tipping points and are adapting and transforming, creating significant uncertainty and stress.</li> <li>— Increased competition is impacting water availability for agriculture due to increasing demands and climate change impacts threatening farm and regional viability creating a challenge for climate adaptation.</li> <li>— There is increasing concern over rising pH levels along with phosphorus and nitrogen levels in local waterways</li> <li>— There has been an expected rise in watertables in response to recent flooding. Monitoring of levels will continue.</li> <li>— Undrained catchments in the SIR remain at risk of waterlogging and salinity. Expansion of the Drainage Course Declaration program and continued adaptive management remains fundamental to meeting climate change challenges as well as actively contributing to building the region's resilience.</li> <li>— Land use is changing with nearly a quarter of irrigators (surveyed in Land Use Mapping project) transitioning land use due to reasons such as health, age, and changing ownership. The cumulative and fast rate of change (e.g. increase in larger, corporate farms) is creating concern about the impact on native vegetation such as paddock trees and historic plantings, and other natural resources.</li> <li>— Recent floods and storms have had variable impacts on local businesses that rely on irrigated agriculture. Workforce challenges are also being experienced within the agricultural industry.</li> </ul>



**Catchment condition:** ● Very poor    ● Poor    ● Satisfactory    ● Good to excellent

i. Investment areas apply to the whole-of-catchment, apart from Sustainable irrigation, which applies only to the Agricultural Floodplains social-ecological system (and the associated Shepparton Irrigation Region Land and Water Management Plan).

ii. Risk of systems not being in desired state of resilience in the long term given current support. The desired state is often different from the current state and is usually not the pre-European state. Investment areas can be considered as systems and they are highly interconnected. Support includes government funding and community investment.

Resilience assessment							Long-term strategic implementation	Details page
Critical attribute affecting long-term catchment health <sup>iii</sup>	Contribution to system function		Risk to system thresholds / tipping point					
	1990	2023	Trend 2020-23	With current support	With no support			
Soils for agriculture	<span style="color: red;">●</span>	<span style="color: green;">●</span>	—	MEDIUM	HIGH	Middle	70, 72-73	
Purpose and use of private land	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	—	MEDIUM	HIGH	Watch & adapt	68, 72-73	
Purpose and use of public land	<span style="color: orange;">●</span>	<span style="color: orange;">●</span>	▲	MEDIUM	HIGH	Watch & adapt	68	
Invasive plants and animals	<span style="color: green;">●</span>	<span style="color: orange;">●</span>	▲	HIGH	VERY HIGH	Middle	69, 71, 72-73	

Water availability for the environment	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	—	MEDIUM	HIGH	Early	76
Water availability for Agriculture	<span style="color: blue;">●</span>	<span style="color: orange;">●</span>	▲	HIGH	VERY HIGH	Escalated response <sup>iv</sup>	77
Water quality	<span style="color: red;">●</span>	<span style="color: green;">●</span>	▲	MEDIUM	HIGH	Watch & adapt	77
Watertables	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	▲	MEDIUM	HIGH	Watch & adapt	78
Native vegetation extent <sup>v</sup>	<span style="color: red;">●</span>	<span style="color: red;">●</span>	▲	VERY HIGH	VERY HIGH	Middle	79
Farm and regional viability	<span style="color: blue;">●</span>	<span style="color: green;">●</span>	▲	HIGH	VERY HIGH	Escalated response <sup>iv</sup>	80

**Contribution to system function:** ● Very poor ● Poor ● Satisfactory ● Good to excellent  
**Risk to system thresholds / tipping point:** ▲ Increasing significantly ▲ Increasing — Stable ▼ Declining

iii. Many critical attributes relate to the 20 to 30-year objectives listed in Goulburn Broken CMA sub-strategies.

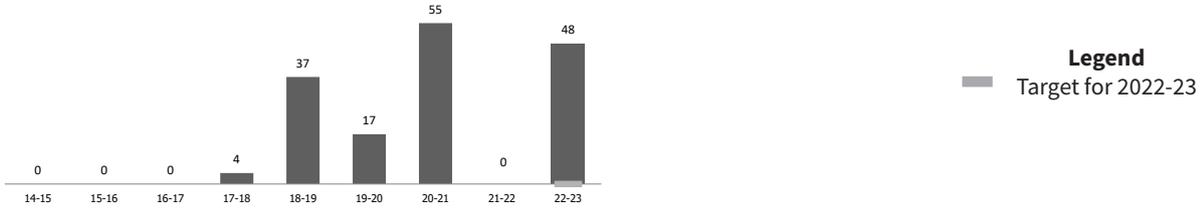
iv. 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.

v. These vegetation attributes recognise that threatened species are part of ecological systems.

## Outputs achieved 2014-15 to 2022-23

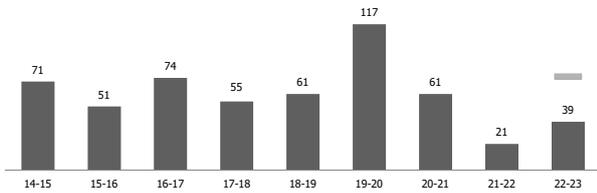
The following outputs were achieved through one or more investment areas (listed on the previous and following pages). They indicate progress towards long-term targets listed in the Regional Catchment Strategy and sub-strategies.

### Irrigation drains built, km



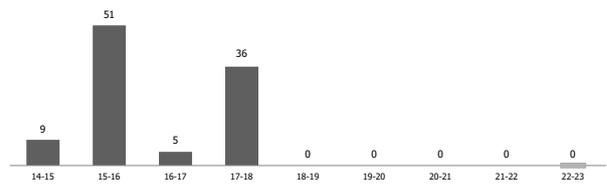
A 2015 review resulted in reduced drainage requirements and renewed priorities including a new hybrid approach (pages 78, 83 and 85).

### Whole farm plans prepared, no.



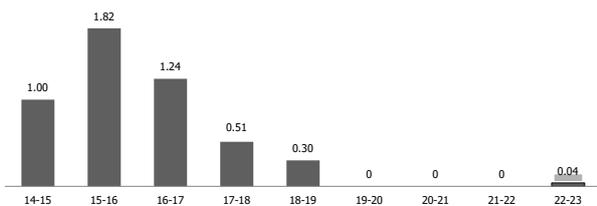
Demand and need for whole farm planning remains strong due to an increase in redevelopment and amalgamation of land. Widespread flooding in 2022 has also reinforced the need for farm drainage related planning (pages 81 and 85).

### Reuse systems installed, no.



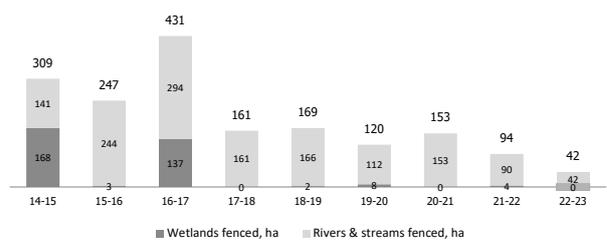
Significant achievements from 2012 to 2018 due to the Farm Water Program. Funding for these works ceased in the Goulburn Murray Irrigation District from 2018 (page 85).

### River or stream bed & bank protection actions, km



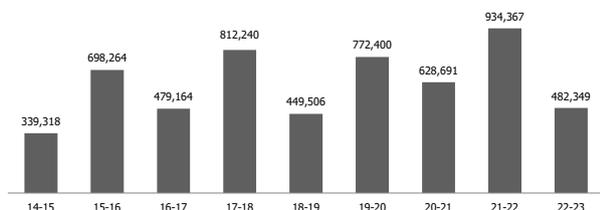
Hard engineering approaches are used less now, with a preference for vegetation. In the absence of significant flood recovery programs, recent trends are expected to continue (pages 40-41, 44-46 and 50).

### Riparian land fenced, ha



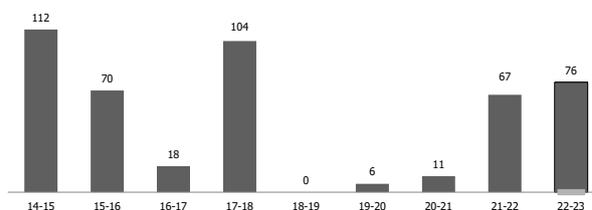
Grazing is now well managed beside long lengths of rivers and streams through fencing from regular and opportunistic fund sources, and through changes in tenure. Significant lengths remain to be improved, and maintenance of previous efforts is becoming a priority (pages 40-41, 44-46 and 50).

### Environmental water use, ML



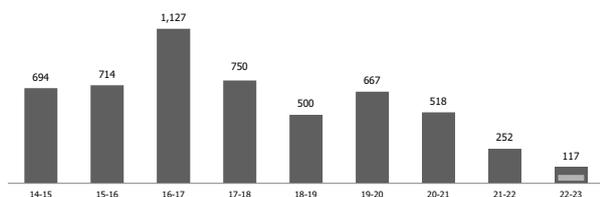
Annual environmental water use is influenced by seasonal conditions and environmental water availability (pages 38, 40-41, 44-45, 48-49).

### Long-term conservation agreements, ha



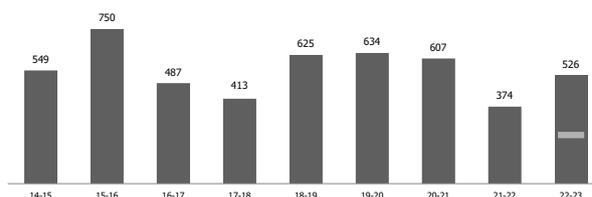
These outputs are for Goulburn Broken CMA-funded permanent conservation agreements (covenants) (pages 63 and 65).

### Remnant vegetation fenced, ha



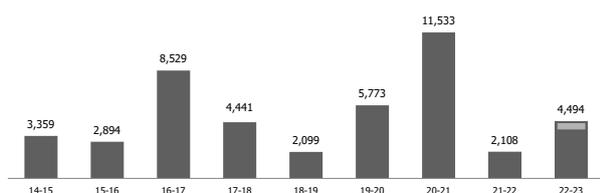
Australian and Victorian Governments are no longer including the output 'remnant vegetation fenced ha', and instead are using 'revegetation natives' as the output for fenced remnants. Remnants are considered as sites naturally regenerating (pages 63-65 and 74).

### Indigenous revegetation (planted), ha



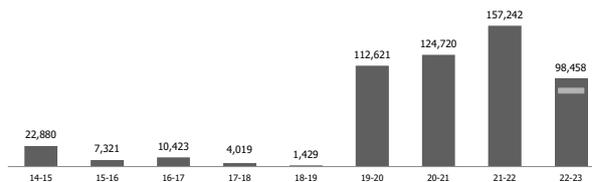
Revegetation continues to be important in creating resilient landscapes through connectivity projects (pages 63-65 and 74).

### Weeds treated, ha



Weed control is a focus for the Victorian and Australian Governments (pages 69, 71 and 74).

### Pest animal control, ha



From 2021-22, Victorian Government reporting has split pest animal control into 'Herbivore' and 'Predator' animal control. For the purpose of this graph and continuity of data these have been combined (pages 69, 71 and 74).

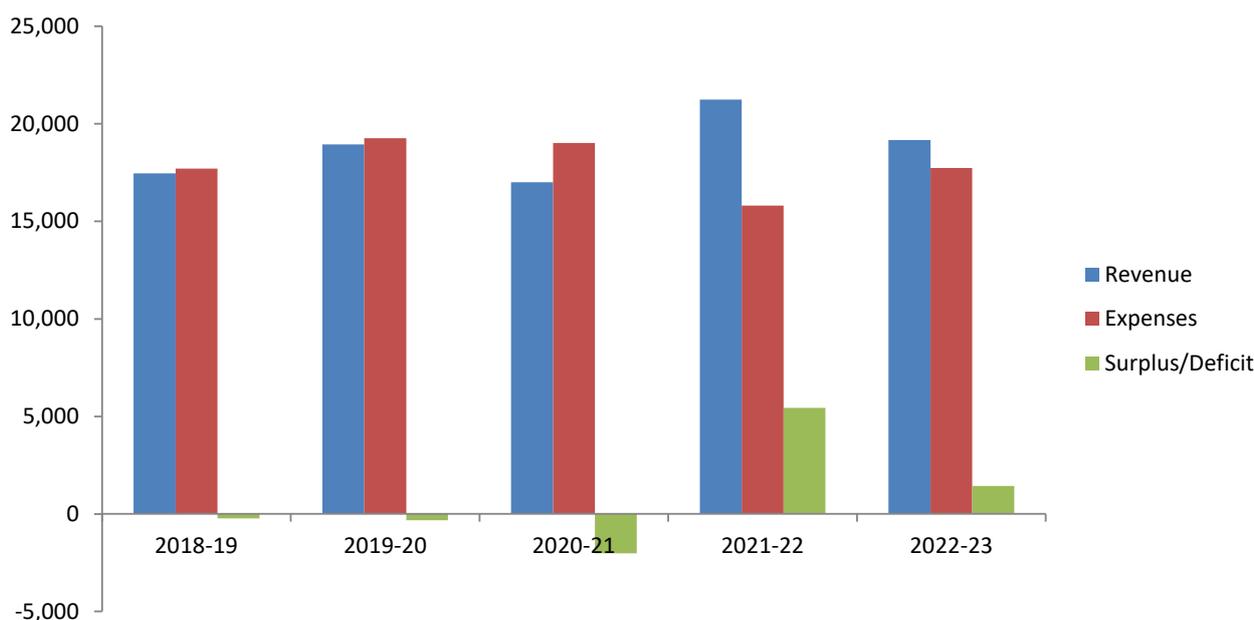
## Annual scorecards

### Indicative investment and gross output performances in investment areas

Investment area <sup>i</sup>	Investment <sup>ii</sup> (including partnership funds)				2022-23 performance <sup>iv</sup> (outputs)	Details page
	2020-21 \$0	2021-22 \$000	2022-23 \$000	Budget <sup>iii</sup> 2023-24 \$000		
Community and the Environment						
Community <sup>v, vii</sup>	926	1,144	732	716	On target	33
Sustainable irrigation	4,074	5,971	5,164	1,841	On target	75
Waterways	4,868	6,571	5,760	4,770	On target	38
Floodplain management	1,025	868	1,637	840	On target	52
Biodiversity	2,876	2,838	2,514	2,267	Exceeded target	58
Land	622	501	420	336	Exceeded target	67
The Business (Corporate)						
Governance <sup>vii</sup>	1,488	2,200	2,093	1,788	On target	96
Human resources <sup>vi</sup>	6,108	6,391	6,545	8,676	On target	88

- i. Appendix 1 describes the analytical framework, including terms used in this table. Ratings legend is inside front cover.
- ii. Investment figures include funding to partners, except for the Invasive plants and animals investment area.
- iii. Based on the budget in the Corporate Plan 2023-24 as at June 2023.
- iv. Performance ratings are based on outputs achieved as listed under investment area details in this annual report. Targets are determined by considering levels of government funding, as listed in the Corporate Plan and any subsequent adjustments over the financial year. Outputs are listed in Appendix 4.
- v. In addition to specific expenditure, community engagement is integrated into the delivery of outputs across all investment areas outlined above.
- vi. These are costs rather than investments. Costs are embedded within other investment areas.
- vii. The approach to calculating Community and Governance was revised in 2020-21 and prior years were recalculated for consistency.

### Financial summary 2018-19 to 2022-23, \$000 <sup>i</sup>



i. See Financial results summary on page 110 for details.

## Aggregate output performance across all investment areas in 2022-23

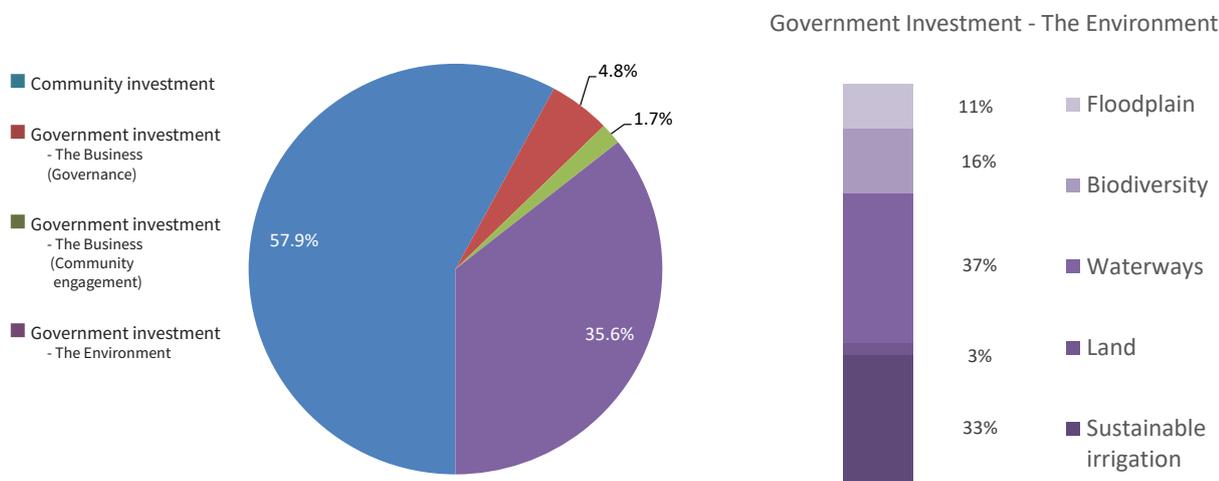
Output <sup>i</sup>	Achieved	Target <sup>ii</sup>	Performance	
			% achieved	Rating
Remnant vegetation fenced, hectares	117	41	286	Exceeded target
Wetlands fenced, hectares	-	-	-	-
Rivers and streams fenced, hectares	42	-	-	Exceeded target
Riparian land fenced, hectares	42	-	-	Exceeded target
Long-term conservation agreements, hectares <sup>iii</sup>	76	-	-	Exceeded target
Indigenous revegetation planted, hectares	526	235	224	Exceeded target
Irrigation drains built, kilometres	48	-	-	Exceeded target
Reuse systems installed, numbers	-	-	-	-
Laser levelling, hectares	1,453	1,365	106	On target
Groundwater pumps installed, numbers	-	-	-	-
Weeds treated, hectares	4,442	4,118	108	On target
Pest animal control, hectares <sup>iv</sup>	97,778	84,828	115	Exceeded target
Environmental water use, megalitres	482,349	-	-	-
River or stream bed and bank protection actions, kilometres	0.04	-	-	Exceeded target
Fishway structures installed and barriers modified, numbers	-	-	-	-
Threatened species projects, numbers	-	-	-	-
Whole farm plans prepared, numbers	39	75	52	Below target

- i. Outputs shown in this table are derived from the more detailed set in Appendix 4, including the full list of footnotes. Outputs are described in Appendix 1 under 'Annual performance'. Detailed outputs relating to each investment area are listed in sections devoted to each investment area throughout this report.
- ii. Targets are determined by considering levels of government funding as listed in the Corporate Plan and any subsequent adjustments over the financial year.
- iii. These are shown as 'Binding management agreements' in the detailed outputs in Appendix 4. This target will only be reported once a covenant is on title, which may take more than 12 months.
- iv. From 2021-22, Victorian Government reporting has split pest animal control into 'Herbivore' and 'Predator' animal control. For continuity of data these have been combined.

### Descriptions of output performance

Investment area details in the community and environment section pages 29 to 87 describe actions undertaken in 2022-23 and illustrate integration between programs, government agencies and priorities, regional authorities, community organisations and individuals.

### Goulburn Broken investment share <sup>i, ii</sup>



- i. See bar chart on page 34 for cost-sharing details.
- ii. See investment and gross output performance in investment areas table on page 22 for more detail.

## Responding to the Minister's expectations

### Victorian Government priority policy areas

Victorian Government priority policy areas Measures:	Goulburn Broken CMA contribution to the priority areas	Achievement details for 2022-23 see page
<b>Climate change - Active investigation into new opportunities to sequester carbon</b>		
<ul style="list-style-type: none"> <li>— Explore opportunities to sequester carbon and generate offsets.</li> <li>— Progress on climate change adaptation initiatives outlined in the climate change and catchment strategies.</li> </ul>	The Goulburn Broken CMA will manage the State-wide climate change coordinator and manage the implementation of a state-wide project investigating co-benefits and co-investment frameworks to support water corporations Net-Zero targets.	32
	The Goulburn Broken CMA will also investigate opportunities to generate off-sets to support its Net-Zero ambitions.	93
	The Goulburn Broken CMA continues to look for opportunities to integrate climate adaptation into all programs, without specific funding to implement a climate change adaptation program, this includes considering climate change projections in project development.	32
	The Goulburn Broken CMA will be reviewing its Climate Change Integration Strategy in 2022-2023. The renewed Goulburn Broken RCS has outlined a range of climate change adaptation actions to be implemented with adequate resourcing.	32
	The Goulburn Broken CMA continues to support broader climate change adaptation and mitigation through the Goulburn Murray Climate Alliance.	32
<b>Waterway and Catchment Health – Improve catchment and waterway health and resilience</b>		
<ul style="list-style-type: none"> <li>— Develop and coordinate the implementation of your new regional catchment strategy according to legislative changes and new guidelines established by The Victorian Catchment Management Council.</li> <li>— Deliver waterway and integrated catchment management in line with Water for Victoria, Our Catchments Our Communities – building on the legacy and Victorian Waterway Management Strategy.</li> <li>— Report on Catchment Partnership Agreements for your region in accordance with the Framework for Catchment Partnership Agreements.</li> </ul>	The Goulburn Broken CMA has renewed the Regional Catchment Strategy in line with the guidelines and through extensive engagement. The Goulburn Broken CMA will support implementation of the RCS, through a comprehensive coordination and monitoring project. This will include a 'seed' funding grant round, a detailed monitoring, evaluation, reporting and learning program and an engagement program. This will be supported by the Goulburn Broken Partnership Team.	29-31
	The Goulburn Broken CMA will complete a review of the Regional Waterway Strategy 2014-2022 in mid 2022, whilst continuing to deliver against its intent.	39, 44, 50
	The Goulburn Broken CMA will also continue to deliver against the Goulburn Broken Regional Floodplain Management Strategy (2018-2028).	53-57
	The large-scale projects outlined in Water for Victoria and funded through the three-year Victorian Water Programs Investment Framework will be delivered. In Goulburn Broken's case the Goulburn Broken CMA will work with TLaWC to bring together western and traditional knowledge to look at opportunities to better manage the Mid Goulburn River as part of the new flagship project, for example.	44-46
	The Goulburn Broken CMA will deliver the annual planning, delivery, monitoring and review cycle related to environmental water within the catchment, including the development of seasonal watering proposals.	44-45, 48-49

Victorian Government priority policy areas Measures:	Goulburn Broken CMA contribution to the priority areas	Achievement details for 2022-23 see page
<b>Waterway and Catchment Health – Improve catchment and waterway health and resilience (continued)</b>		
	The Goulburn Broken CMA will also participate in DELWP-led processes including the Constraints 1a program and the Goulburn to Murray Trade rule review, both of which are important for the long-term condition of the Goulburn River.	51
	The Goulburn Broken CMA will report on the Catchment Partnership Agreement through the Goulburn Broken CMA Annual Report. This will be reviewed through the support of the Our Catchment Our Communities project funded through the three-year Victorian Water Programs Investment Framework in accordance with the State-wide Framework for Catchment Partnership Agreements.	13, 35
<b>Water for Agriculture – A productive and profitable irrigation sector and vibrant and resilient regional communities that adapt</b>		
<ul style="list-style-type: none"> <li>– Promote sustainable irrigation management practices to support the growth and viability of regional communities.</li> <li>– Planning and coordination activities to manage salinity, waterlogging and water quality in agricultural areas.</li> <li>– Providing flexibility for agriculture to continue to adapt to change and help the sector do more with less water.</li> </ul>	The Goulburn Broken CMA will continue to deliver onground works (including through the efficient and effective new Hybrid Drainage approach) to manage impacts around surface drainage and sub surface-drainage with Goulburn-Murray Water.	83
	The Goulburn Broken CMA will manage and report on salinity issues as per the requirements under the Basin Salinity Management Plan 2030.	83
	The Goulburn Broken CMA in partnership with Agriculture Victoria and irrigators will continue to deliver Whole Farm Planning, support extension activities, improved energy system understanding and land use understanding across the irrigated landscape.	81
	The Goulburn Broken CMA will continue to work with catchment partners to assist with the modernisation of farm systems, leading to optimised public irrigation system assets and reduced water losses and how to adapt through changing practices and systems.	81
	Improving farm systems to allow for a future with less water in the Goulburn Murray Irrigation District (GMID) (and related irrigation footprint issues) is a key component in planning for resilient communities. The Goulburn Broken CMA will continue to lead the GMID community in considering the transformation of the region particularly through the recently developed GMID Resilience Strategy (and five key interventions) as well as commencing the update of the Shepparton Irrigation Region Land and Water Management Plan.	82, 84
	Activities to increase knowledge around the impacts of land use changes, and complementing it by supporting implementation of appropriate agricultural practices, will continue.	82
	The implementation of the Agricultural Re-development Coordination project will continue to work across the SIR to improve development outcomes and reduce environmental impacts.	81
	The Goulburn Broken CMA is investigating the opportunities a circular economy approach could play in supporting natural resource management.	81, 84
	The Goulburn Broken CMA will continue to work with North East CMA to better understand a lower water future and the implications for the region.	82

Victorian Government priority policy areas Measures:	Goulburn Broken CMA contribution to the priority areas	Achievement details for 2022-23 see page
<b>Community engagement and partnerships – A strong engagement focus that is a cornerstone of all CMAs' functions</b>		
<ul style="list-style-type: none"> <li>– Continue to build extensive, effective, and consistent approaches to community engagement and partnerships in regional planning and implementation.</li> <li>– Work collaboratively with organisations and communities to strengthen engagement approaches and capacity.</li> </ul>	<p>The RCS renewal has involved extensive community and partner engagement. This engagement will continue to be built on through the RCS implementation. The Goulburn Broken CMA will be implementing an RCS Pledge process to enable the community to engage and support the implementation of the RCS.</p>	29-31, 34-36
	<p>The Goulburn Broken CMA will renew its Engagement Strategy in 2022/2023, supporting, promoting, and building capacity in our community networks across the Catchment. Key groups include:</p> <ul style="list-style-type: none"> <li>• The Shepparton Irrigation Region (SIR) People Planning and Integration Committee</li> <li>• Landcare Network Chairs Group</li> <li>• Goulburn Broken Indigenous Consultation Group</li> <li>• Local Government Biodiversity Reference Group</li> <li>• Land and Biodiversity Implementation Forum</li> <li>• Environmental Water Advisory Groups (3)</li> <li>• Community driven Local SES Planning</li> <li>• Goulburn Murray Resilience Task Force</li> <li>• Regional Partnerships</li> <li>• Senior combined partners</li> <li>• Goulburn Broken Partnership Team</li> </ul> <p>Note: These groups feed into a much larger community network i.e. 96 community NRM groups, 12 NRM networks, over 5,089 members. This includes the ongoing use of Landcare facilitators and coordinators who support the delivery of many projects across the Catchment.</p>	33, 35, 37, 101-102, 165
<b>Recognise and support Aboriginal cultural values and economic inclusion in water sector – Effective engagement of Traditional Owners</b>		
<ul style="list-style-type: none"> <li>– Number of effective engagements and partnerships with Traditional Owners in water planning and management that have led to improved outcomes for Aboriginal communities.</li> </ul>	<p>The Goulburn Broken CMA will continue to facilitate the Indigenous Consultation Forums, including with Yorta Yorta Nation Aboriginal Corporation and Taungurung Land and Waters Corporation with a focus on the implementation of the RCS. Goulburn Broken CMA will continue to explore two-way learning opportunities with a focus on co-design, including strategy, project planning, contributing to project teams and service delivery on Country.</p>	33-34, 36, 66
	<p>The Goulburn Broken CMA will also engage both Registered Aboriginal Corporations to deliver onground works on Country, through State and Federally funded projects.</p>	36, 60, 63
	<p>The Goulburn Broken CMA is seeking Yorta Yorta high level input as well as work crew 'Woka Walla' involvement in the delivery of the Goulburn River Environmental Flow monitoring.</p>	47
	<p>Taungurung Land and Waters Corporation have identified key cultural wetland sites and are involved in the planning delivery of environmental water to those sites.</p> <p>Importantly 2022-23, will see the early phases of implementation of the Taungurung Recognition and settlement agreement continue. While this agreement is fully welcome and supported by the Goulburn Broken CMA, the full extent of costs and benefits of this to Goulburn Broken CMA programs is unknown.</p>	44-46
	<p>The Goulburn Broken CMA will support government policy initiatives including identifying opportunities and challenges to success</p>	2, 36

Victorian Government priority policy areas Measures:	Goulburn Broken CMA contribution to the priority areas	Achievement details for 2022-23 see page
<b>Resilient and liveable cities and towns – Healthy communities and resilient, liveable environments</b>		
<ul style="list-style-type: none"> <li>– Collaborating with water corporations and local government, including the participation in Integrated Water Management Forums, to help facilitate integrated water management, with a focus on enhancing public open spaces.</li> <li>– Participating in the development and implementation of integrated water management plans, particularly through prioritising measures to enhance urban waterway values.</li> </ul>	<p>The Goulburn Broken CMA will continue to participate in the Goulburn Broken Integrated Water Management Forum. This will support delivery of, and identifying of, new collaborative projects for consideration in the Goulburn Broken Strategic Directions Statement.</p>	<p>Continued support however no significant activity this year given flooding and a review of the forum.</p>
	<p>The Goulburn Broken CMA will continue to support the RiverConnect program in the Shepparton-Mooroopna area. Importantly this year will see the renewal of the strategic plan. This program brings together a range of interest groups to enhance engagement opportunities with the Goulburn and Broken rivers in the urban landscape.</p>	<p>47, 84</p>
	<p>The GMD Resilience Strategy has been developed and is now a key tool for the engagement of the broader regional community as part of implementation. The strategy moves the region on a path to greater collective strength under the resilience framework. This will require a collective shift in ways of operating from all stakeholders.</p>	<p>82, 84</p>
<b>Recognise recreational values – Support the well-being of communities by considering recreational values of waterways</b>		
<ul style="list-style-type: none"> <li>– Water services that explicitly consider recreational values, within existing frameworks.</li> <li>– Engagement with the community to identify and prioritise recreational opportunities to deliver recreational objectives relating to the management of water and waterways.</li> <li>– Accessible and user-friendly information for recreational users about river and waterway condition to help community members plan their recreation activities.</li> <li>– Collaboration with other organisations and government agencies to explore and progress opportunities to support recreational values.</li> </ul>	<p>In recent years the Goulburn Broken CMA has worked to strengthen relationships with recreational users of waterways. Significant ground has been made with recreational angling groups, with support of other government agencies, including VRFish, The Australian Trout Foundation and Native Fish Australia. In the past 12 months COVID-19 restrictions hampered progress in this area but it is anticipated that in 2022-23 the Goulburn Broken CMA can continue to progress initiatives in this area. This includes recreational value representation on the three Environmental Water Advisory Groups.</p>	<p>47</p>
	<p>Recreational values are considered in the renewal of the Regional Catchment Strategy.</p>	<p>30-31</p>
	<p>The understanding of the farming community of the importance of environmental watering has improved but is continually challenged by the affordability of water used for productive agriculture.</p>	<p>82</p>

Victorian Government priority policy areas Measures:	Goulburn Broken CMA contribution to the priority areas	Achievement details for 2022-23 see page
<b>Leadership, diversity and culture – Reflect the diverse needs of the community</b>		
<ul style="list-style-type: none"> <li>– Developing strategies and goals that will increase cultural diversity in the workforce and gender equity in executive leadership.</li> <li>– Encouraging staff participation in the Victorian Public Sector Commission 'People Matter Survey' or equivalent survey.</li> </ul>	Renew Workforce Strategy to include lessons and opportunities from the delivery of the 2017-2022 Diversity & Inclusion Plan, achieve compliance and advancement with the <i>Gender Equality Act</i> .	88-89
	Continued implementation of the Flexible Workforce Framework to reflect our modern workforce and maintain capabilities of our employees to meet outcome requirements.	89
	Participation in the People Matter Survey will continue to provide an annual check-in on progress against workforce strategy actions.	88, 103
	Annual Board Performance Assessment and report.	101
<b>Improved performance and demonstrated results against outcomes</b>		
<ul style="list-style-type: none"> <li>– Collaborating with DELWP to improve reporting systems and processes.</li> <li>– Demonstrate outcomes of government investment into waterways and catchment health.</li> <li>– Delivering efficiency through shared services, smarter procurement, and lower-cost technology.</li> <li>– Commit to working collectively via Vic Catchments membership to strengthen collaboration and performance in the catchment management sector in Victoria.</li> <li>– Commit to delivering integrated catchment management, including leading the implementation and monitoring of catchment partnership agreements.</li> </ul>	The Goulburn Broken CMA maintains the policies, procedures, and resources to deliver reporting and funding obligations.	101
	The Goulburn Broken CMA will contribute to the Annual Report and Action and Achievements report.	10, 35
	The Goulburn Broken CMA is implementing the State-wide Catchment Indicators as developed through the Regional Catchment Strategy renewal.	11-13
	The GB RCS Monitoring, Evaluation, Reporting and Learning Plan will help demonstrate the outcomes of the RCS.	29-31
	The Goulburn Broken CMA will continue to be an active member of the Regional Investment Coordinators Group which collaborates with DELWP on reporting processes and systems.	96
	The Goulburn Broken CMA continues to work along with the eight other Victorian CMAs to identify arrangements to reduce costs through shared services (e.g. GIS) and systems (e.g. Finance), smarter procurement (e.g. firewall and licensing), improved reporting and analytics and lower-cost technology (e.g. PowerBi, GIS) to reduce the impact of the funding environment.	96
	The Goulburn Broken CMA will continue as a member of Vic Catchments.	34

## The Regional Catchment Strategy, resilience and climate change

Compiled by Kate Brunt, Ashley Rogers, Christine Glassford, Meegan Judd and Michael Carrafa.

This section reports on the planning approach and implementation against objectives of the Goulburn Broken Regional Catchment Strategy 2021-2027 (RCS) and the Goulburn Broken CMA Corporate Plan 2022-23. The RCS provides the overall strategic context for details of implementation reported in other sections.

The RCS:

- is developed with the community and is aimed at achieving social, economic and environmental benefits
- is a requirement of the *Catchment and Land Protection Act 1994*
- was developed in 1997 (coinciding with the advent of CMAs) and revised in 2003, 2013 and 2021.

### The resilience approach

In recent years, the Catchment's communities and environment have been severely tested by fires, droughts, floods, the COVID-19 pandemic and other major events, catalysing the CMA's focus on developing resilience.

Resilience is the ability of the Catchment's people and environment 'to absorb a shock or setback and to flourish in spite of it, maybe even because of it' (Outback, Apr/May 2017). It does not mean 'ploughing through' and doing what we have always done. It is the capacity to cope with change and continue to evolve in positive ways.

The resilience approach to catchment management focuses on connections between people and nature, how these connections change, and at what point this could completely transform our social and ecological systems. Understanding system resilience helps us identify where and how to intervene to influence its future direction and achieve desired, balanced goals for natural resource management.

Implementation of the strategy follows key principles for developing the general resilience of the Catchment:

1. Develop a complexity view of the world – shifting from a linear perspective to a complexity perspective recognising systems.
2. Plan for change – governance approaches that embrace change, which in turn helps the Catchment prepare for, respond to and learn from change.
3. Design for flexibility across multiple possible futures – design natural resource management activities to be flexible, mobile, and moveable, allowing for easy future adaptation.
4. Foster cohesion, self-organisation, and local responsibility – fosters cohesive communities that have the internal capacity to find solutions rather than relying on external support, are better able to respond to disturbance and capitalise on opportunities.
5. Manage connectivity – maintains and restores connectivity to allow flow between parts of a system (such as knowledge and resources). Considers under or over connections which can present risks to catchment health.

6. Value, retain and build diversity and redundancy – provide options and potential for different responses under stress. This includes building diversity (of people, cultures, practices, land uses and so on) to increase different responses to shocks and stress. It also involves redundancy or back-ups that can perform similar roles in a system, which reduces the likelihood of failure and aids recovery.
7. Focus on slow variables, leverage points and tipping points – builds system awareness and focuses efforts where they can be most useful (such as causes rather than symptoms of the problem).
8. Learn for change – learning-by-doing and forward-focused learning that can drive adaptation and transformation. This is more useful than relying on hindsight and past experience when dealing with high uncertainty and change.

(Ryan, P; 2018, Goulburn Broken CMA resilience principles workshop, adapted from Biggs, RM 2012.)

### Regional Catchment Strategy (RCS)

The Goulburn Broken Regional Catchment Strategy (RCS) is a vision for the integrated management of natural resources in the Catchment. It is a blueprint for improving catchment health and builds on achievements and lessons from the past. The RCS describes the current condition of the natural resources, principles to guide change, priority actions and what success looks like in 2040.

The RCS is an ambitious strategy and describes the urgent and large-scale change required to improve the Catchment's natural resources and mitigate climate change. In addition to current activities and investment, we will need to find alternative ways of doing things and new investment sources to achieve the outcomes of the Strategy.

The RCS is for all organisations, groups and individuals contributing to the Catchment's natural resource management. We all have an important role to play to reverse the declining health of the Catchment's land, water and biodiversity. Goulburn Broken CMA is responsible for coordinating and monitoring the strategy.

A resilience approach underpins the strategy and focuses on how we can increase the capacity of the Catchment to cope with change and evolve positively.

The RCS is built on more than 30 years of achievements, including the 1997, 2003 and 2013 strategies. This is the first time the RCS has been presented as a website (<https://goulburnbroken.rcs.vic.gov.au/>).

The diagram on the facing page provides a summary of the strategy.

# Goulburn Broken Regional Catchment Strategy 2021-27

**Purpose:** Collaborative strategy to guide actions to improve and protect the Goulburn Broken Catchment's land, water, biodiversity and community.



Community and Environment

## Regional Catchment Strategy coordination and monitoring

Goulburn Broken CMA is responsible for the coordination and monitoring of the RCS under the *Catchment and Land Protection Act 1994 (CalP Act)*. Coordinated, collaborative and innovative implementation across a diverse range of organisations, groups and individuals is essential if we are to achieve the Strategy's visions for the future and long-term goals. Goulburn Broken CMA has developed a project plan to coordinate and monitor the Strategy, with three broad objectives:

1. Coordinate overall communication, engagement, and collaboration on the Goulburn Broken RCS.
2. Support Goulburn Broken RCS implementation through influencing sub-strategies and implementation plans, seed funding and capacity building.
3. Develop and implement a monitoring, evaluation, reporting and learning plan to monitor progress against the Goulburn Broken RCS outcomes and adapt implementation.

The project will be ongoing throughout the life of the strategy, and if successful will achieve the following outcomes:

1. Catchment partners have strong ownership of the Goulburn Broken RCS and collaborate on its implementation.
2. Resilience thinking guides Natural Resource Management in the Goulburn Broken catchment.
3. Implementation of the Goulburn Broken RCS is adaptive, using a learning-by-doing approach.

Key project activities during 2022-23 included establishing RCS project governance; release of seed funding for collaborative, innovative projects; participation in the Catchment Stewardship MER project and the development of the Goulburn Broken RCS Monitoring, Evaluation, Reporting

and Learning (MERL) plan. Round table workshops were conducted for Land health and Biodiversity themes, to support a collaborative approach to address changing catchment conditions. This included development of innovative project concepts and establishing lines of evidence that will track progress towards the medium-term outcomes identified within the RCS. Engaging with Goulburn Broken CMA partners on Water and Community themes will occur in 2023-24.

The Goulburn Broken RCS Monitoring, Evaluation, Reporting and Learning (MERL) plan guides delivery and is utilised to demonstrate the outcomes of the RCS.

The Goulburn Broken CMA has implemented an RCS Pledge portal to enable the community to engage and support the implementation of the strategy. In total, 55 individuals and 30 organisations have pledged their support to the RCS.

## Corporate Plan 2022-23

The Corporate Plan is prepared annually in accordance with sections 19C and 19D of the *Catchment and Land Protection Act 1994*. It follows high-level directions set in the RCS and describes priorities in line with the Ministers letter of expectations (pages 24-28). It satisfies new and emerging requirements from the regional community, the Goulburn Broken CMA Board and government funders, and includes annual details on investment and expected achievements within programs:

- Sustainable Irrigation (pages 75-87)
- Land, Biodiversity, Indigenous and Community (pages 33-37 and 58-74)
- River & Wetland Health and Floodplain (pages 38-57)
- Corporate (pages 88-100).

## Research and development, evaluation and adaptation

While government funding agencies require project reports on short-term performance and impacts on long-term progress, the lack of a standardised approach in catchment management reporting means that requirements change regularly and often differ between and within agencies.

Against this backdrop, Goulburn Broken CMA has held critical evaluation processes constant, such as monitoring against benchmarks, allowing an understanding of long-term progress (including impact on Catchment condition) to be gained.

The Goulburn Broken region follows a systematic process of reviewing and updating plans and strategies. This was first described in the 2004 Goulburn Broken CMA Monitoring Evaluation Reporting (MER) Strategy that was reviewed and updated in 2016-17 to align with the RCS. The Ready for Change – Evaluation Strategy for the Goulburn Broken Catchment 2017-22 articulates how Goulburn Broken CMA monitors progress against strategies and plans. This includes the need for adaptation of existing strategies, or the development of new strategies in response to emerging issues or critical drivers, within a resilience framework.

Local social-ecological system (SES) planning across the Catchment is helping Goulburn Broken CMA understand critical attributes and thresholds. This is critical in local adaptive planning and implementation to build the resilience.

Integrated catchment management involves decisions based on information from different backgrounds and disciplines.

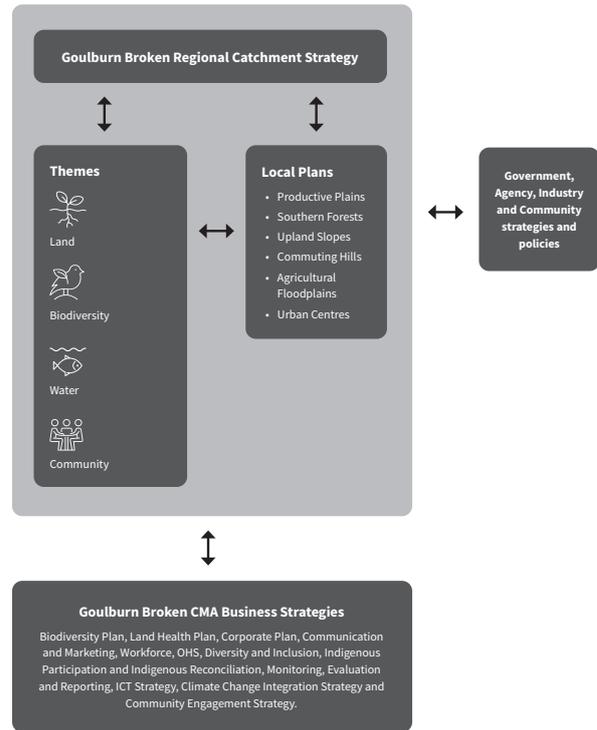
Goulburn Broken CMA's efforts to standardise outputs since 2002-03 (see Appendix 4) and to summarise progress via long-term scorecards since 2005-06 (see pages 14-19) are important in developing a uniform language and framework, enabling comparisons over time and helping Goulburn Broken CMA, the community, agencies and government investors to understand the benefits and trade-offs of decisions. The framework provides a stable and ongoing approach, while government funding frameworks and language change frequently.

The linking and aggregating of site-specific actions (or outputs) to long-term outcomes via the McLennan-O'Kane equation,  $Outputs \times Assumptions = Outcomes$ , has further fostered common understanding between disciplines and identified priority knowledge gaps. This helped drive many regional and national research and development projects over several years.

Investment in partnerships that enable Goulburn Broken CMA to invest in and access research and development activities and information continues to be a priority. Efforts during 2022-23 are highlighted within each investment area section of this Annual Report.

## Regional Catchment Strategy and sub-strategies structure<sup>i</sup>

i. see Appendix 9 for the evolutionary status of the sub-strategies.



## What's next?

- Continue to implement the monitoring indicators within the Goulburn Broken RCS Monitoring, Evaluation, Reporting and Learning (MERL) plan to track catchment condition change for each of the four themes; Land, Biodiversity, Water and Community. This information will be presented on the RCS website to demonstrate progress towards the medium-term outcomes defined in the RCS and to outline RCS outcomes to the broader community.
- In conjunction with our catchment partners, continue to develop innovative project concepts that will be supported through the RCS round table workshops.
- Through ongoing collaboration, develop a prospectus for future funding opportunities, identifying a number of priority projects that contribute to positive catchment change.

## Climate change

Climate change science continues to support the need to act, with local actions playing an important role in the global challenge. Climate change mitigation and adaptation remain an important focus for Goulburn Broken CMA. Over the past twenty years, there have been more frequent high temperatures and changed rainfall patterns with drier winters and springs and less reliable autumn rain. There has also been an increased frequency of extreme events such as floods, fire and drought.

Goulburn Broken CMA's 'Climate Change Integration Strategy 2012-2015' and Environment Policy (2022) have been important guides to ensure consideration of climate change is embedded within business decisions and processes. The Goulburn Broken CMA integration strategy is due to be reviewed and in doing so the CMA will determine the future relevance of this document and update if required.

The Board reviewed whether the Authority was meeting its climate change obligations to understand how climate science is built into all Goulburn Broken CMA programs. The CMA is incorporating climate change considerations into planning and decision making.

A review process of the Environment Policy in 2022 resulted in endorsed emissions targets, actions to reduce emissions and consideration of the need to invest in carbon offsets to achieve carbon neutrality by 2025.

Key guidance in these documents include:

- integrate climate change into Goulburn Broken CMA programs
- improve understanding of climate change
- pool and attract resources
- build catchment resilience into sequestration activities
- support community mitigation efforts
- minimise the Goulburn Broken CMA environmental and climate impacts.

Goulburn Broken CMA considers climate change in all aspects of our catchment approach and is also focused on our own footprint and pathway to net zero emissions. A recent internal review of CMA activities showed that all programs are considering climate change risk and adaptation, and CMA staff regularly collaborate with technical experts to ensure climate change is considered in project and/or strategic planning. CMA staff are involved in knowledge sharing and communities of practice on climate mitigation issues, along with involvement in guidance materials for strategy development. Goulburn Broken CMA includes climate change in its risk assessment which is updated on a regular basis.

Goulburn Broken CMA continues to aim to provide leadership in supporting community and the natural environment in responding and adapting to climate change. An example is through the ongoing support to the Goulburn Murray Climate Alliance (GMCA). The GMCA is a network of 17 committed local government, Victorian government, and alpine resort partners across the Goulburn and Upper Murray regions, responding and adapting to climate change through innovative projects and research.

Goulburn Broken CMA's performance and activities in climate change are summarised in the next section.

## 2022-23 performance

Goulburn Broken CMA was focused on delivering the renewed Regional Catchment Strategy which had a significant focus on climate change impacts. Goulburn Broken CMA was also active through statewide collaboration, facilitated by the Statewide Climate Change Coordinator. Deliverables included:

- Goulburn Broken CMA CEO continued in the role as the portfolio lead for climate change for CMAs across the state.
- Recruitment and hosting the Statewide Climate Change Coordinator, which will continue to deliver focused climate change activities for the region and across the state.
- Goulburn Broken CMA (through the Statewide Coordinator role) participated as a project team member working with VicWater focusing on Victorian Water Corporations net zero obligation. CMAs have a supportive role in implementation, as well as advocating co-benefit and co-investment opportunities.
- Goulburn Broken CMA also hosting a dedicated Climate Change NRM Coordinator position, tasked with working with all Victorian CMAs and DEECA on developing a blue and teal carbon investment plan. The coordinator also assesses climate change adaptation actions that are detailed in CMA NRM Adaptation plans to identify enablers and barriers to adaptation faced by CMAs.
- Collaborated with North East CMA to support water agencies to work with community to adapt to a different water future.
- Goulburn Broken CMA is exploring what partnerships with carbon developers could look like and what the opportunities are for Natural Resource Management outcomes – co-benefits.
- Goulburn Broken CMA is a member of the Victorian CMA NRM Planning for Climate Change Forum that began in 2013. Through the coordinator, the Forum actively works with the Victorian Government to influence and embed recently developed regional climate change adaptation plans and strategies into state policy development.

## What's next?

- Goulburn Broken CMA will continue to host the Statewide Climate Change Coordinator and the Climate Change NRM Coordinator who support all CMAs to maintain currency on Victorian and Australian government developments in climate policy and legislation.
- Goulburn Broken CMA will continue to explore co-investment opportunities for carbon abatement projects within the catchment aiming to achieve benefits for carbon and biodiversity.
- Consideration will be given to updating the adaptation plan including vulnerability assessment and identification carbon planting areas.
- Increased activity and research of climate change adaptation science and community expectation.
- Preparation for the renewal of the GB Waterway Strategy will commence and will aim to incorporate the latest climate science and adaptation thinking.

# Investment area - Community

Compiled by Darelle Backway, Kerstie Lee, Zuzanna Lelito, Michael Carrafa, Carla Miles, Martine Hooper and Bek Caldwell.

## Long-term and annual scorecard <sup>i</sup>

2022-23 performance	On target
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Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
	●	●	MEDIUM

Traditional Owners involvement in Natural Resource Management is increasing, supported by awareness, resourcing, policy and legislative change.

Communities, partner organisations, farmers and others have achieved significant onground changes and are influencing attitudes and behaviours within Natural Resource Management.

Diverse stakeholders are represented on high-level regional and local community NRM forums: farmers, Traditional Owners, local and regional government agencies, Landcare and recreation groups, and others work well in partnership and are strongly networked. Increased urbanisation continues to influence the catchment community.

Funding for agencies to support local community groups and individuals is uncertain, volunteers are ageing and participation in government programs is dropping off due to increasing complexity of programs and volunteer requirements. However, the level of volunteering is increasing in response to disasters (in less formal settings) e.g. 2022 floods volunteers helping within affected community.

There has been an increased ability to engage with parts of the community as a result of the increase in technological skill stimulated by COVID-19. There is now a transition to new ways of engaging and leading with and within the community through hybrid and face to face opportunities made possible from COVID-19 and due to demographic shifts in the community.

Resilience assessment						Long-term strategic implementation <sup>v</sup>	
Critical attribute affecting long-term catchment health	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>			Start	Stage
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>		
Community capacity to influence and lead	●	●	▲	MEDIUM	HIGH	1990	Escalated response <sup>vii</sup>
Community capacity to be involved and act onground	●	●	▲	MEDIUM	HIGH	1990	Watch & adapt

The certainty rating for Community is medium due to well establish links with the community and feedback provided through community forums.

- i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.
- ii. Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators on higher level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.
- iii. System is Community; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- iv. Risk that system will not be in desired state of resilience in long term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- v. Long-term strategies vary significantly in formality: 'start' approximates when holistic, integrated approach to influencing critical attribute began.
- vi. Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.
- vii. 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.

### Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
926	1,144	732	716

i. Budget is based on the Corporate Plan 2023-24.

### Strategic references

The Goulburn Broken Communication, Community Engagement and Partnership Strategy 2022-27 along with the Goulburn Broken Community NRM Action Plan 2020-2025 factor in numerous national, state, local strategies and policies that aim to engage community groups, partner agencies and individuals, supporting the Goulburn Broken CMA in leading long-term decisions and implementation. Several strategic engagement documents reflect the needs and knowledge of the Catchment's Traditional Owners; the Yorta Yorta and Taungurung peoples. See Appendix 6 for the list of strategic documents that relate to community engagement.

## Background

The future of Goulburn Broken catchment's environment depends on its people. The regional community typically invests \$1.50 for every dollar of government funding (see bar chart below). Influencing how others invest is therefore an important activity for the Goulburn Broken CMA.

This section demonstrates how Goulburn Broken CMA is committed to involving individuals and organisations to make the best long-term decisions and achieve onground change.

## Catchment condition - Community (since 1990)

Goulburn Broken catchment communities' resilience benefits from the legacy of having to face significant threats to the environment and economy in the late 1980s and 1990s. Community leaders at the time recognised the complexity of threats, uncertainties about responding, and the need for a whole-of-catchment response. Integrated catchment management, along with strong partnerships between communities and government, were at the core of the approach.

A step-change in integration was achieved when waterways and land management responsibilities became part of regionally based organisations with the advent of Victorian CMAs in 1997. The integrated catchment management approach of the Goulburn Broken CMA enabled immediate and strong follow-up responses to significant threats and opportunities in recent years. The Catchment's communities have demonstrated their ability to self-organise and adapt. However, in recent time the community's ability to deliver onground and to influence and lead Natural Resource Management (NRM) is changing.

For more than a decade, the Goulburn Broken CMA's recognition and inclusion of Traditional Owners (Yorta Yorta and Taungurung peoples) and their knowledge has been reflected in managing the Catchment. Goulburn Broken CMA continue to support Traditional Owners in their self-determination. Traditional Owners developed their 'Whole of Country Plans' that reflect their values, actions and objectives in relation to caring for country. This has been reflected in the high level of engagement of both Registered Aboriginal Parties in the renewal of the Goulburn Broken Regional Catchment Strategy 2021-27 and regular consultation meetings. Supporting the capacity of the Traditional Owners to be self-determining continues to be a priority.

## Major contributions to natural resources management, \$million



## Long-term strategy implementation progress and 2022-23 performance

Each Goulburn Broken CMA strategic document highlights the pivotal role of people in achieving environmental outcomes. Community capacity to influence and lead, to be involved and act onground are critical attributes for long-term community resilience. A major function of the Goulburn Broken CMA is to support groups, individuals and agency partners, to maximise their capacity.

Goulburn Broken CMA works in partnership and alongside landholders, Traditional Owners, school children, community NRM groups, environmental groups, partner agencies, and individuals to deliver programs across the Catchment that protect and improve its natural assets.

Efforts to boost the Catchment's resilience can lead to increasingly productive landscapes, which will support the long-term viability of our communities in the face of constant change.

Goulburn Broken CMA continues to measure the health of partnerships annually, in line with the partnership agreement.

Engaging in statewide and national NRM forums such as Vic Catchments and NRM Regions Australia is an ongoing commitment for the Goulburn Broken CMA.

## Community capacity

Community capacity activity includes:

- Engagement, extension and delivery of landholder (especially farmer) works consistent with the RCS, with works on thousands of sites covering thousands of hectares and multiple benefits. See bar charts page 20 and 21.
- Supporting coordination and knowledge sharing across local government areas.
- 35 per cent of Goulburn Broken CMA's Municipal Catchment Coordinator position is funded by the three municipalities in the Shepparton Irrigation Region. See further information on page 84.
- Supporting community organisations and individuals: 79 active groups and networks; 2,391 members plus 4,378 non-member volunteers (2021-22 Landcare survey, completed in 2023). See Regional Agriculture Landcare Facilitator (page 71).
- \$1.6 million for 89 Victorian Government and Australian Government grants to community and partner organisations (see table page 36 for details).
- Goulburn Broken CMA convenes quarterly meetings of the Goulburn Broken Local Government Biodiversity Reference Group across eight Councils, DEECA and CFA; enhancing ongoing networking between the group to support and strengthen partnerships and messaging to Government and to community.

There is increasing stakeholder investment in, and support for, the Goulburn Broken RCS through 'Our Catchment, Our Communities' and associated programs. Fifty five individuals and 30 organisations have pledged their support to the recently renewed Goulburn Broken RCS 2021-27. This number is expected to grow as the strategy continues to be implemented, with catchment partners contributing ideas to the monitoring of the strategy and developing innovative projects for seed funding.

## Awareness and information highlights 2022-23

- More than 143,100 page views to the website in 2022-23.
- The flood homepage of the Goulburn Broken CMA website was updated in October, providing access to emergency flood information and resources during major flooding across the catchment. In October there were 48,782 page views to the website. From 12-19 October there was a 300 per cent weekly increase from average traffic, resulting in 38,242 page views.
- Victorian Minister for Water Harriet Shing visited the Benalla office on 19 October, in the wake of the floods, speaking to staff and viewing the Goulburn Broken Community Flood Intelligence Portal.
- A new webpage featuring dissolved oxygen levels in real time across the Catchment's waterways was developed explaining dissolved oxygen, blackwater and the impact low oxygen blackwater has on aquatic animals.
- A public events calendar, detailing Goulburn Broken CMA and partner activities, was activated on the website.
- Continued increase in social media followers in the past year with Facebook at 3769 followers, up from 3492; Instagram 712 followers, up from 659; and LinkedIn 403 followers, up from 249. Twitter has 1846 followers.
- The Landcare and Community Update e-newsletter, produced by the Regional Agriculture Facilitator, was distributed to more than 1300 subscribers per edition.
- More than 20 media releases were distributed with almost 100 per cent take up.
- A monthly column in the Country News, provided community updates on Goulburn Broken CMA activities and events, reaching more than 44,000 households.
- Goulburn Broken CMA contributed case studies to the Victorian Catchment Management Authorities Action and Achievements Report which highlighted the great outcomes achieved for the State's natural environments, agricultural landscapes and communities.

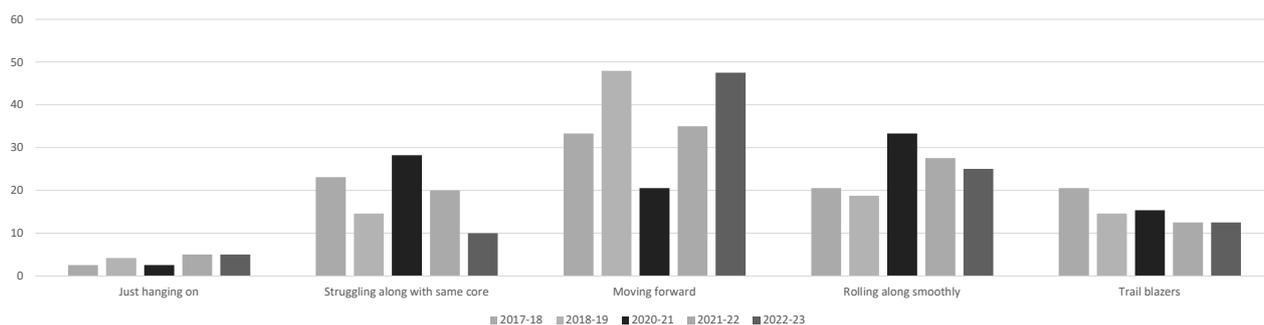
## Community volunteer contributions in 2022-23

Activity	Hours <sup>i</sup>
Onground works	14,280
Learning and training	9,772
Promotion and communications	3,641
Planning and other administration	9,400

i. Excludes network chair meetings and coordinator/facilitator meetings and their other work.

## Landcare group health status, % of groups

Data from annual surveys of Landcare groups.



## Catchment Partnership Agreement

The 2023-2027 Catchment Partnership Agreement was renewed in consultation with 37 organisations. Partnerships are critical to the success of broadscale landscape health initiatives and have been the foundation of natural resource management (NRM) in the Goulburn Broken catchment (the Catchment) for over 25 years. This partnership approach to NRM is reflected in Victorian Government legislation and delivery frameworks, which support Integrated Catchment Management through mechanisms including Regional Catchment Strategies and Regional Partnership Agreements across the ten Victorian Catchment Management Authority areas. The *Catchment and Land Protection Act 1994* promotes co-operation of persons and bodies involved in land, water and biodiversity management in the region. The renewal, coordination and implementation of the RCS is an example of how this partnership approach guides regional planning and onground actions across the catchment.

Goulburn Broken CMA and partners continue to engage with and support the rightful participation of Traditional Owners on country, recognising that Traditional Owners have a deep connection to care for and heal Country.

All 38 organisations including Goulburn Broken CMA signed the Catchment Partnership Agreement for 2023-2027, recommitting to working together for catchment outcomes.

## Communication, Community Engagement and Partnership Strategy 2022-2027

Goulburn Broken CMA developed the Communication, Community Engagement and Partnership Strategy; recognising that effective communications, meaningful community engagement and collaborative partnerships are essential if Goulburn Broken CMA is to achieve its vision of resilient landscapes, thriving communities, and improve and protect the catchment's land, water, biodiversity and community.

This strategy sets out the guiding principles, outcomes, and strategic directions for communication, community engagement and partnership activities delivered by Goulburn Broken CMA board members, staff, and projects.

The Goulburn Broken CMA has commenced implementing initiatives that have been developed as a result of the strategy. The Implementation Plan is updated annually to ensure that planned activities are aligned with the strategic goals.

## Traditional Owner partnerships

Goulburn Broken CMA's long relationship with Traditional Owners continues to mature and the involvement of Yorta Yorta Nation Aboriginal Corporation (YYNAC) and Taungurung Land and Waters Council (TLaWC) in natural resource management continues to expand. This continuum is supported by regulatory changes and government initiatives such as the Taungurung Recognition and Settlement Agreement, and the broader self-determination policies. Goulburn Broken CMA continues to partner with YYNAC and TLaWC to implement Country Plans and other Traditional Owner Strategies and the Goulburn Broken RCS. Goulburn Broken CMA supports opportunities for Traditional Owners to work on and heal Country, by engaging the two Registered Aboriginal Parties' environmental teams (TLaWC's Biik Cultural Land Management and YYNAC's Woka Walla crew) to deliver onground works through Victorian and Australian Government funding. Projects involving the works crews have included key Regional Landcare Programs including the Barmah Ramsar project, the Mending the Mountain Pygmy Possum project, Barmah Country and the Linking Landscapes (Grey Box) project, Taking Care of Country Project and the Headwater Willows Project. In addition to achieving onground environmental outcomes, these projects provide a valuable opportunity for Traditional Owners to get back on country, to heal community and country. This approach recognises and respects each Nation's deep connection with their land, water and country, their individual cultural practices and their right to self-determination. It also provides opportunities for Traditional Owner knowledge and western science to come together.

Both YYNAC and TLaWC continue to expand their respective businesses and build their own capacity through various avenues. Two-way training and engagement opportunities continue to be actively sought with Traditional Owners such as the floodplain ecology course and supporting business development through the Follow the Flowers project.

Goulburn Broken CMA has worked actively with landholders, Traditional Owners and partner agencies to improve consideration and protection of cultural heritage values during the development of whole farm plans, irrigation developments and other onground works. Internal capacity building of staff has been a focus this year with significant updates to internal procedures related to cultural heritage compliance and Land Use Activity Agreement requirements.

Where culturally appropriate, Goulburn Broken CMA works in partnership with Traditional Owners to incorporate knowledge and language in forums and projects such as the development of publications, interpretive signage and engagement events with school groups and the broader community.

Goulburn Broken CMA aims to involve all staff and Board members in further cultural awareness/competency training to ensure that protocols for engagement and protection of Traditional Owner cultural heritage and values are understood across the organisation. During 2022-23 YYNAC and TLaWC have not had the capacity to deliver this training. However, internal training on cultural heritage compliance and the Taungurung Land Use Activity Agreement was delivered for relevant staff during 2022-23. TLaWC presented at the annual staff workshop in March 2023 contributing to cultural awareness and partnership development. Staff participate in events throughout National Reconciliation Week and NAIDOC week. A four-part series of 'Off Country' was screened for staff in June 2023. Ongoing cultural competency training remains an ongoing priority for the organisation.

In addition to ongoing project collaborations, consultation forums are held with Traditional Owners (monthly with TLaWC and quarterly with YYNAC) to co-plan, design and deliver projects to heal country and community. In 2023 the TLaWC Consultation Group began being referred to as Dhum-djerring ('talk together'). A renewal of the MOU with YYNAC is underway and plans are in place to develop a formal Partnership Agreement with TLaWC. A Traditional Owner Partnerships role was introduced into the organisation in 2022-23 to help nurture and formalise relationships with Traditional Owners and build internal capacity to fulfil obligations under emerging policy agendas.

Traditional Owners are increasingly more involved in planning and project design (e.g. Corop Wetland Complex, Reedy Lake, Gemmill's Sandhills), cultural assessments and technical advice (e.g. Hybrid Drainage Program and River Health). Goulburn Broken CMA has supported three pilot projects with TLaWC including leading the development of a Seasonal Watering Proposal for the first time, the Corop Cultural Waterscape Program and the Waring (mid-Goulburn) Flagship Project. Goulburn Broken CMA continues to implement and report on its Reconciliation Action Plan.

## Grants to community organisations from Victorian and Australian Governments

Victorian and Australian Government grants to community organisations for activities like revegetation and regeneration of native vegetation, control of invasive plants and animals, support for capacity building initiatives, and education and awareness raising activities. Below is a summary of grants Goulburn Broken CMA paid to the community / partners through Government Funding Programs.

Total grants paid to community groups and other organisations 2022-23	No. of projects	Amount paid \$ (ex GST)
Australian Government - Regional Land Partnerships Program	26	\$999,096
Australian Government - Other	4	\$55,571
Victorian Government - Victorian Landcare Grants	42	\$133,906
Victorian Government - Victorian Water Programs Investment Framework	12	\$313,523
Victorian Government - Other	5	\$102,556
<b>Grand Total</b>	<b>89</b>	<b>\$1,604,652</b>

See Appendix 8 for full list of payments made during 2022-23.

The total grants paid in the table above will not reconcile with the grants paid amount in Note 3.2 of the financial statements.

The amount stated in the financial statements includes all incentives paid, including those to individuals for Biodiversity and River Health management activities.

## Tri-State Alliance

The Tri-State Murray NRM Alliance (the Alliance) is made up of the seven Natural Resource Management agencies along the Murray River Corridor from Victoria, New South Wales and South Australia. The Alliance works together to build the capacity and capability of the region to 'Grow the Economy, Secure the Environment and Motivate the Community'.

The priorities identified in the Alliance Fish Connections strategy continue to be implemented by partners. This included:

- establishment of refuge populations of Southern Pygmy Perch and Southern Purple Spotted Gudgeon to reduce their extinction threat and provide source populations for conservation stocking
- release of Southern Pygmy Perch, Southern Purple Spotted Gudgeon, River Blackfish and Freshwater Catfish into waterways to help establish new wild populations
- discovery of four new populations of Flat-headed Galaxias
- investigating the genetics of key threatened species to inform conservation work
- development of a pamphlet on how to enhance farm dam habitat for native fish
- establishment of a public display at the Melbourne Aquarium and
- delivery of community and school engagement events.

The Alliance, as part of the Indigenous East-West Alliance, continued to support the Follow the Flowers' project led by Outback Academy. The Alliance component was led by Goulburn Broken CMA. Key deliverables for participating NRM organisations were to support and identify potential Indigenous business opportunities and assist in the development of business plans to move these businesses forward. Seven Business Plans were completed with the majority in the honey and native flower production space. A Drought resilience forum at Dookie provided the opportunity to showcase the work of this project. Channel 10 'The Project' picked up on the Follow the Flowers story and did some filming at the Rumbalara site (Shepparton) for showcasing in NAIDOC week. In an exciting development Outback Academy has been able to source an additional \$980,000 in funding through the Victorian State Government's Workforce Training Innovation Fund (WTIF) to support what is effectively a new phase of the Follow the Flowers project through to February 2024. This Victorian only focused funding will be used to develop Victorian First Nations Regenerative Farmers, through a skill development model.

The Alliance has continued to collectively implement and advocate for activities that support the Murray River corridor and its communities.

## What's next?

Goulburn Broken CMA will remain vigilant in watching and responding to potential and actual changes impacting on the Catchment's communities and their capacity to contribute to NRM. Community engagement and partnerships continue to be a priority during implementation of the RCS and is supported by:

- implementation of projects aligned to Our Catchments Our Communities and other Victorian Government initiatives
- continue to build support of the implementation of the Goulburn Broken RCS
- supporting the implementation of the Goulburn Broken RCS within existing Landcare Networks to increase the leadership within our community
- continuous investigation and development of the best ways to engage with the community to plan at a local scale
- continued implementation of the Communication, Community Engagement and Partnership Strategy (2022-2027)
- continued support for statewide and national engagement and communication approaches, such as promoting the benefits of environmental flows
- continued engagement with TLaWC and YYNAC Consultation Groups
- implementation of Goulburn Broken CMA Community NRM Action Plan (2020-2025)
- advocating for continued support of the current 4.5 FTE facilitator positions across Community NRM Groups
- Reconciliation Action Plan 2021-23 will be reviewed and updated, demonstrating how the CMA is supporting the national reconciliation agenda and integrating Traditional Owner connectivity into our business
- the 2014 Goulburn Broken CMA/YYNAC MOU is being reviewed and renewed, and a Partnership Agreement between the Goulburn Broken CMA and TLaWC will be developed
- co-design and implementation of projects with Traditional Owners (e.g. via Natural Heritage Trust and EC6 funding) and
- continue to seek Australian Government funding to implement environmental (e.g. threatened species) and agricultural activities for improved NRM and community resilience.

## Investment area - Waterways

Compiled by: Mark Turner, Simon Casanelia, Daniel Lovell, Keith Ward, Tim Barlow, Meegan Judd, Simon Cowan, Jo Geddes, Christine Glassford, Corey Wilson, Pam Beattie, Sue Kosch, Kirsten Roszak, Collin Tate, Janice Taylor, Lydia Drake, Jim Castles, Carla Miles and Beth Millsteed

### Long-term and annual scorecard<sup>i</sup>

2022-23 performance	On target
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Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
			<b>MEDIUM</b>

Overall river health has improved from changes such as removal of stock grazing and key fish barriers, resnagging, tree planting, wastewater management and delivery of water for the environment. However, blue-green algae, hypoxic blackwater events and pH levels are all increasing.

Extreme events (e.g. flooding) and climate change continue to be a significant challenge.

The 2022 floods had positive impacts on floodplain wetlands providing spawning and breeding opportunities for many native fauna and improved condition of wetland vegetation. Waterbird populations and habitat have recently increased due to the floods and environmental flows, however many populations across the Murray-Darling Basin seem to be declining.

The 2022 floods caused significant erosion and channel change in some mid to upper catchments. Damage has occurred to riparian vegetation and instream habitat in areas where vegetation is lacking, while the presence of riparian vegetation provided resilience to banks.

Flood recovery works are progressing to address impacts to infrastructure, pest plants and animals, animal welfare and environmental damage.

Available water for the environment is protecting and improving waterway health and function. Opportunities to improve the effectiveness, e.g. delivery constraints, exist. Consumptive water also poses environmental challenges in some instances.

Waterways face increasing pressure from recreation and other land uses including urbanisation.

Traditional Owner input and inclusion of biocultural knowledge is increasing in waterway management, with local and regional agency and broader community partnerships strengthening.

Unauthorised activity across the catchment is affecting waterways.

Resilience assessment						Long-term strategic implementation <sup>v</sup>	
Critical attribute affecting long-term catchment health	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>			Start	Stage
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>		
Stream flows and wetland inundation - Dammed (regulated) streams			—	<b>MEDIUM</b>	<b>VERY HIGH</b>	2011	Early
Stream flows and wetland inundation - Undammed (unregulated) streams			▲	<b>HIGH</b>	<b>VERY HIGH</b>	1995	Middle
Streamside (riparian) vegetation			▼	<b>LOW</b>	<b>HIGH</b>	1997	Late
Water quality			▲	<b>MEDIUM</b>	<b>HIGH</b>	1996	Watch & adapt
Fish passage and habitat			▼	<b>LOW</b>	<b>MEDIUM</b>	1997	Late
Community capacity to be involved and act onground <sup>vii</sup>			—	<b>HIGH</b>	<b>VERY HIGH</b>	1997	Middle

Certainty of rating is High. Certainty around general waterway condition is high due to repeated application statewide of the 'Index of Stream Condition'. This is supported by further strategy and knowledge work including the final review of the Regional Waterway Strategy, the review of the 20-year Water Quality Strategy, increased network of real-time water quality monitoring sites, annual fish population monitoring at selected sites, the statewide Instream Woody Habitat Assessment and increasing knowledge on management of water for the environment.

i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.

ii. Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators on higher-level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.

- iii. System is Waterways; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- iv. Risk that system will not be in desired state of resilience in the long term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- v. Long-term strategies vary significantly in formality: 'start' approximates when holistic, integrated approach to influencing critical attribute began.
- vi. Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.
- vii. Includes regional government agency and stakeholder leadership, partnerships, and tools to change long-term directions and implement short-term onground changes.

### Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
4,868	6,571	5,760	4,770

i. Budget is based on the Corporate Plan 2023-24.

### Strategic references

The Goulburn Broken Waterway Strategy 2014-2022 integrated direction and guidance from legislation, policies, strategies and plans at international, national, state, regional and local levels. Implementation of this strategy factored in prevailing circumstances, including current priorities identified through local planning (see page 30). The final review of this strategy was completed in June 2022. Renewal of the strategy will begin in 2023-24

Murray-Darling Basin Authority and Victorian Government water plans and strategies are pertinent references for waterways management. Appendix 6 includes a more complete list. Waterway management in regional Victoria is the responsibility of catchment management authorities (*Water Act 1989*, part 10).

### Background

Waterways benefit ecosystems cultural and spiritual values, recreation, human consumption, agriculture and irrigation, industry and commerce, and mental and physical wellbeing. Waterways are often central to the culture of the Goulburn Broken catchment's Traditional Owners, the Yorta Yorta and Taungurung peoples.

Despite covering only two per cent of its area, the Catchment provides 11 per cent of the Murray-Darling Basin's water resources, providing major benefits within and beyond the Goulburn Broken catchment.

Waterways have been impacted by the construction of weirs for water storage, diversion of flows, native vegetation clearing and removal of snags (woody debris), use of groundwater, invasion by pest plants and animals, stock access, and urban and agricultural development.

Key changes in the second generation Goulburn Broken Waterway Strategy 2014-2022 included:

- incorporation of wetlands and lessons learnt, including from the Millennium drought and prior fires and floods
- incorporation of a 'resilience approach' to align with the Goulburn Broken Regional Catchment Strategy
- updated stream and wetland condition data
- identification of new roles and responsibilities in Natural Resource Management, such as establishment of the Victorian and Commonwealth Environmental Water Holders.

### Catchment condition – Waterways (since 1990)

The community's long-term vision for waterways is: 'Resilient waterways, vibrant communities. The waterway systems of the Goulburn Broken region are vibrant and resilient so that communities can enjoy the values and benefits they provide and contribute to their maintenance and improvement.'

### Catchment condition assessment part I: Progress in achieving resilient long-term benefits

There has been significant improvement in water quality and fish populations. Overall amenity has also increased due to significant improvements in streamside vegetation, in the face of increased development and recreational pressure in many locations.

#### Clean water

Like much of Australia, Goulburn Broken waterways are well within thresholds for most environmental quality indicators specified under the *Environmental Protection Act 2017* Environmental Reference standards, and a watching brief (mainly for sudden events and negative long-term trends) is mostly appropriate.

Salinity contributions from the region comply with targets under MDBA processes.

#### Fish

The Goulburn Broken catchment has 21 of 46 native fish species in the Murray-Darling Basin. The preferred location for inland recreational fishing in Victoria is the Goulburn Broken catchment at 26 per cent, creating threats and opportunities for long-term resilience of native and non-native fish species.

Victorian Fisheries Authority surveys from 2017 to 2021 showed wide distribution of Murray cod and good survival rates from spawning; Trout Cod at five sites, with good numbers downstream of Lake Nagambie; and Silver Perch at seven sites, although in low numbers.

A trial to re-establish the threatened Southern Pygmy Perch (a six-centimetre native fish) at McLarty's Lagoon (a private wetland complex on the Goulburn River floodplain north of Seymour) and Freshwater Catfish in the lower Broken Creek continued. The project is being implemented with the support of ARI, TLaWC, YYNAC, NCCMA and VFA. The project aims to reduce the risk of Southern Pygmy Perch and Freshwater Catfish extinction by re-establishing them in areas where they have become locally extinct.

#### Plants, animals and ecological communities

Social media apps are enabling an increase in citizen science, with data starting to help researchers more accurately determine the status of many species. Goulburn Broken CMA has an app that records frogs, fish, reptiles and birds of the catchment.

Seasonal herbaceous wetlands are mainly on agricultural land across the riverine plains of the Catchment and are critically endangered. Many have discrete characteristics that are often only visible after significant rainfall.

Alpine bogs and fens are in Taungurung Country, and are the subject of investigation because they remain at significant risk from a warming climate, fire, exotic weeds, grazing by non-native animals, and increasing tourism pressure.

### **The Living Murray Icon Sites (Barmah Forest) and Wetlands in the Directory of Important Wetlands of Australia**

#### **Vegetation**

In the Barmah Forest, River Red Gum health is recovering after declining significantly during the Millennium drought. Moira Grass marshlands are significantly depleted, estimated to be at five per cent of pre-river regulation levels, but showing strong recovery where fenced off from feral horse grazing pressure. Since 2010, the cover and diversity of wetland plants has improved in response to delivery of water for the environment and natural flooding. Parks Victoria's Barmah Strategic Action Plan for the Protection of Floodplain Marsh and Yorta Yorta Nation Aboriginal Corporation's Joint Management Plan for Barmah National Park are now being implemented and include the control of feral herbivores. Three plant species listed as critical components of the Barmah Ramsar Site's ecological character continue to be actively monitored, with substantial increases in population sizes and distribution documented.

#### **Fish**

Stable populations of most native fish species, with Silver Perch possibly re-establishing in some areas and Golden Perch spawning. Trout Cod have become more prevalent.

#### **Birds**

Delivery of water for the environment has increased opportunities for improving habitat and feeding and breeding for threatened and other water birds at several wetlands, including Gaynor and Reedy swamps. Knowledge is strengthening of Barmah's importance as the last stronghold in Victoria for Eastern Great Egret and Intermediate Egret to nest and supporting 30 per cent of the estimated population of Australasian Bittern (another critical component of the Ramsar Site's ecological character).

#### **Other**

Evidence of successful breeding in a diversity of frogs and turtles has been obtained although crayfish recovery remains slow from hypoxic blackwater events following the Millennium drought. Fox impacts on turtles are declining because of improved understanding and management but will need ongoing management. Frog populations at the ten wetlands that receive water for the environment were supported by environmental water deliveries and natural inflows. At Moodie Swamp Rigid Water-milfoil (nationally threatened plant) and the EPBC-listed Sloanes Froglet continue to be recorded.

#### **Heritage Rivers**

Natural, recreational, scenic, cultural and other values of heritage rivers are likely to have at least been maintained since formal declaration in 1992. They have been supported by being factored into works program priorities. Risks to Big River's values are likely to be low because of its remote location and benign land use. Over time many risks to Goulburn River values have been reduced because of reduced

stock grazing pressure, delivery of water for the environment and improved irrigation and drainage management. However, over recent years unseasonal delivery of Inter-Valley Transfers have negatively impacted on the lower Goulburn River.

#### **Healthy waterways**

There has not likely to have been any significant long-term change in overall environmental values.

#### **High community value waterways**

There have been significant onground improvements with social benefits in many reaches, although several waterway reaches with high social significance are not priorities under the Waterway Strategy's methodology.

### **Catchment condition assessment part 2: critical attributes of waterway resilience**

The resilience of waterway systems has increased significantly since 1990 because of actions such as:

- creation and use of reserves of water for the environment
- partnering with land managers to action onground works within and along streams and on floodplains
- environmentally sensitive changes in how public and private land is managed
- increased integration to achieve multiple benefits, including cultural values
- a step-change increase of community members involved in raising awareness and participating in onground management.

#### **Streamflows and wetland inundation**

##### **Dammed (regulated) streams**

Water set aside and released for the environment has improved flows in regulated streams.

*Long-term objective: Between 2014 and 2022, manage water regimes for ecological outcomes in 13 wetlands and 17 stream reaches.*

Many of the Goulburn Broken catchment's rivers and wetlands were modified as the population grew and land use changed. In some rivers, up to half of the water that would have flowed naturally is removed each year for towns, irrigation and industry, and river flows that do occur are unseasonal. As a result, many waterways and wetlands that depend on the right amount of water at the right time are not able to function as they would naturally.

It is therefore necessary to actively release water into waterways and wetlands to support the plants, animals and functions that depend on them; these flows are called 'water for the environment' and they come from water in storages. Shared benefits of water for the environment include recreational activities like fishing, boating and birdwatching, sustained healthy Country for Traditional Owners and clean water for householders, farmers and food processors. Where possible, water for agriculture, industry and towns is released in a complementary manner and infrastructure is used to ensure rivers, wetlands and floodplains receive the right amount of water at the right time.

The Murray-Darling Basin Plan, adopted in 2012, aims to balance water needs of the environment and other users through the establishment of new volumes of water use

(known as sustainable diversion limits). Although we are in the early stages of learning how to best use water for the environment, evidence of increased resilience from its use includes improving native vegetation, water bird and frog breeding, and fish migration and spawning. Despite this, various pressures are resulting in unseasonal water being delivered down the Goulburn River for use beyond the Catchment, impacting the river's resilience.

Opportunities have increased for Traditional Owners involvement in waterway management, providing technical, cultural and environmental knowledge, and prioritise use of water for the environment.

Since 2008-09, water has been delivered to wetlands and streams in accordance with seasonal watering plans (see table page 48 and bar chart on page 21). Goulburn Broken CMA continues to work with partners to identify opportunities for watering more priority wetlands.

During the unprecedented millennium drought, water was provided to major wetlands and waterways, such as Reedy Swamp, Black Swamp, Moodie Swamp, Doctors Swamp, Goulburn River, Broken Creek and Barmah Forest, providing a refuge until the return of wetter times. Several streams experienced record floods in 2022 revitalising the floodplain that was negatively impacted by the millennium drought which ended in 2020. The resulting floodplain-to-river connection has helped the recovery of waterways, floodplains and wetlands and associated plants and animals.

#### **Undammed (unregulated) streams**

Establishment of sustainable diversion limits and improved management of licensed water-use extraction for agriculture and towns through local management plans has limited flow impacts in unregulated streams. Warm and dry (including climate change) conditions continue to threaten values in unregulated waterways with low and cease-to-flow events increasing.

Nearly ten years since the millennium drought ended, researchers from the University of Melbourne have found that about one third of Victoria's catchments still produce less flows than expected. This means that even though rainfall has improved compared with the millennium drought, the amount of rainfall making it into these rivers is less than it would have been before this prolonged drought. (Ref VicWaCI-Fact-Sheet1.pdf (water.vic.gov.au)). This includes some catchments in the Goulburn Broken region, notably the Strathbogies Ranges.

#### **Streamside (riparian) vegetation**

**Long-term objective: Between 2014 and 2022, increase area of streamside (riparian zones) with stock managed to achieve ecological outcomes by 162 kilometres.**

The target is relatively low compared with significant progress made in the two decades preceding the 2014 Goulburn Broken Waterway Strategy update. In the eight years until 2021-22, just over 125 of the targeted 162 kilometres in priority waterway reaches has been achieved.

Landholders are contributing significantly more than the originally expected 20 metre width of streamside zones. A total of 930 hectares of streamside in priority reaches had a modified grazing regime in implementing the Waterway Strategy (259 per cent of the entire eight-year target of 359 hectares), and 499 hectares of non-priority reaches had stock opportunistically managed.

Between 1997 and 2022, over 1,693 kilometres of fencing has been erected (protecting 12,152 hectares).

The establishment of the Broken Boosey State Park and other reserve areas associated with the Broken, Boosey and Nine Mile creeks, and the more recent establishment of the Lower Goulburn National Park, resulted in more passive use of these areas, less stock grazing pressure, and an overall improvement in the condition of streamside vegetation. Although illegal firewood collection appears to be prevalent.

Engineering works were often used to control erosion and other processes in waterways prior to 2012, but waterways are now managed to achieve appropriate rates of erosion, sedimentation and avulsion over the long term, consistent with natural processes, and as detailed in Policy 11.1 in the 2013 Victorian Waterway Management Strategy. This means that management of the river channel now focuses on maintaining and improving the bed, banks, instream habitat, riparian land and integrated catchment management through riparian management and restoration.

Significant onground works over the last 20 years has improved streamside vegetation on our priority waterways, supported by improved management of water for the environment, community support for waterways and various partnership arrangements as outlined in the community participation section.

In recent years, Goulburn Broken CMA has undertaken some analysis to assess the length of high value waterways protected from stock access. See below for a current estimate.

Stream	Stream length (km)	as at 2021	
		Stock access managed (km)	% length stock access managed
Broken River	189.9	114.2	60
Holland Creek	77.3	46.9	61
Ryans Creek	60.0	48.4	81
Broken Creek	234.8	190.7	82
Boosey Creek	99.6	69.6	71
Goulburn River	542.4	352.4	65
Seven Creeks	137.2	84.0	61
Hughes Creek	84.7	59.9	71
King Parrot Creek	62.9	46.6	74
Yea River	80.4	17.3	22
Acheron River	86.5	51.9	60
Taggerty River	14.7	14.7	100
Rubicon River	44.3	29.2	66
Howqua River	66.5	61.3	92
Delatite River	58.5	39.6	68

## Water quality

**Long-term objective: Continue to meet water quality targets in stream reaches.**

(CMAs are working with DEECA to consider regional water quality target setting in the next renewal of regional waterway strategies. In the meantime, efforts are focused on load reduction targets around phosphorus.)

In the 1996 Water Quality Strategy, blue-green algal blooms were a key focus, and they were managed by reducing nutrient loads in waterways. Phosphorus was chosen as the most appropriate indicator of progress.

The Catchment goal of a 65 per cent reduction in total phosphorus exported from the catchment set in the 1996 Water Quality Strategy is close to being realised, although this is probably in part due to low loads associated with low flows as much as nutrient management work within the Catchment.

Since the Water Quality Strategy implementation began in 1996:

- wastewater treatment plants are no longer a major nutrient source in the Catchment
- the irrigation drainage nutrient contribution has reduced substantially
- the ratio of irrigation drain to dryland source nutrients has changed, such that dryland is now the major nutrient source (in 1996 the ratio of irrigation to dryland was 1.5, in 2016 it was 0.5)
- nutrient loads from intensive animal industries and urban stormwater are unlikely to have changed much.

There have been frequent low dissolved-oxygen and/or hypoxic blackwater events in recent years, which can result in the death of a range of aquatic biota and cause other significant environmental, social and economic impacts. Although hypoxic blackwater events can create problems, not all blackwater events are hypoxic.

Although the processes causing these events are reasonably well understood, they are often difficult to predict and mitigate because they are associated with intense and extensive short-term weather events. The changing climate is likely to increase the risk of low dissolved-oxygen and hypoxic blackwater events through increasing stream temperatures,

low flow, and increasing intense rainfall events during warmer months.

Fires occur regularly in south eastern Australia and can instigate short to medium-term water quality issues. Again, as the climate changes, the impact of fires on water quality needs to be considered. Vast areas of the Catchment were severely burnt between 2006 and 2009 and most of the canopy along riparian zones was removed.

Cold water pollution from dam releases, such as Lake Eildon, can also be significant and needs to be factored into management for ecological outcomes and to meet community expectations.

Gradual increases in pH (becoming more alkaline) in the lower Goulburn River and Broken Creek have been observed in recent years. Current pH levels are still within or close to the Environmental Quality Indicators specified under the *Environmental Protection Act 2017* Environmental Reference Standards. This rise is not thought to be of an immediate concern, however initial investigation into potential cause is planned. The approach is to keep a watching brief.

## Fish passage and habitat

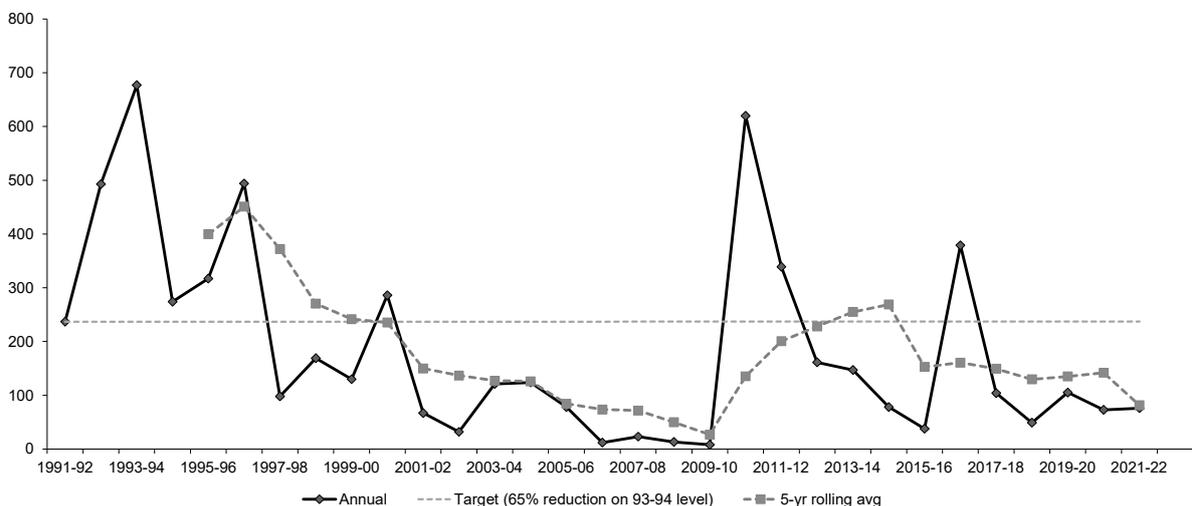
**Long-term objective: Between 2014 and 2022, maintain and increase instream habitat for native fish and other threatened species at 34 sites.**

Weirs and other instream structures like vehicle crossings, which were built post European settlement, made it impossible for fish to migrate along many of our priority waterways, significantly impacting on their capacity to breed, and reducing their access to available habitat, food and shelter. The removal or modification of barriers (by retrofitting fish ladders or fishways) to allow passage for native fish commenced in the 1990s. Most barriers to fish passage that are feasible to manage in Goulburn Broken catchment streams have now been removed or modified, and planning is underway to modify or remove the remaining high priority barriers, such as Gowangardie Weir.

Asset owners must now consider and address fish passage when building new or modifications to existing infrastructure, such as weirs, are planned. Some older fishways might need to have their fish passage design improved.

Instream habitat, such as snags, are sometimes called the inland equivalent of coastal reefs. They provide habitat for

**Total phosphorus loads exported from Goulburn Broken catchment, tonnes/year**



native fish and other animals like turtles and native water rats. Snags have been removed from river systems within the Goulburn Broken catchment in the past for boating safety and navigation, and in the mistaken belief that it would reduce the risk of flooding. Clearing and inappropriate management of native vegetation along streams has also led to a decrease in large woody material introduced naturally into waterways. The removal and reduction in the number of snags has been identified as a major reason for the decline of native fish populations.

Statewide instream habitat mapping paints a grim picture of the current level of instream habitat in lowland streams (particularly the regulated Goulburn River and Broken Creek) compared to pre-European levels: approximately 50 per cent are classed as severely depleted (a greater than 80 per cent decrease), more than 45 per cent are highly depleted (with a 60 to 80 per cent decrease) and around five per cent are moderately depleted (with a 40 to 59 per cent decrease).

Current resnagging is restoring native fish habitat: native fish populations are responding strongly. However, resnagging on its own is unlikely to be the sole driver of native fish recovery. Better management of water for the environment and streamside zones by restricting stock access will result in a constant natural supply of snags in future.

Several large projects funded through the Recreational Fishing Licence (RFL) Grants Scheme and other recent projects have focused on the introduction of large wood and boulders in the mid and lower Goulburn River, Broken Creek, Hughes Creek, Seven Creeks, Holland Creek, Howqua River, and Tahbilk Lagoon: 3027 large snags and rock have been placed in these waterways from 2011 to 2022-23.

### Managing risks from works and activities on waterways

When people undertake works and activities on or adjacent to waterways, which includes rivers, streams and wetlands, there is a risk they may cause environmental damage. The potentially significant risks to waterway health of new works or activities in, under or over designated waterways are managed through By-Law No. 3 Waterways Protection 2014. Works require a permit from Goulburn Broken CMA.

### Index of stream condition

In Victoria, the Index of Stream Condition and the Index of Wetland Condition measure condition including changed hydrology, water quality, form (such as width, depth and meander wavelength), vegetation health, and species diversity. These indices provide part of the information for decisions; they are measured against a pre-European settlement baseline, and not what communities desire now.

In 2010, 15 per cent of stream length in the Goulburn and Broken basins were in good or excellent condition (nine and six per cent respectively; see bar chart to right). The overall condition had not significantly changed since 2004.

Assessments of Goulburn Broken catchment wetlands undertaken since 2009 indicate that most are in good or moderate condition (38 and 40 per cent respectively), with the remaining in excellent (six per cent), poor (15 per cent) and very poor condition (less than two per cent). The results also indicate that wetlands on public land are generally in better condition than those on private land.

### Community capacity to be involved and act onground

*Includes regional government agency and stakeholder leadership, partnerships, and tools to change long-term directions and implement short-term onground changes.*

While Goulburn Broken CMA has a leading role in waterway and wetlands health, many critical decisions and most works affecting waterways and wetlands are undertaken by parties other than Goulburn Broken CMA.

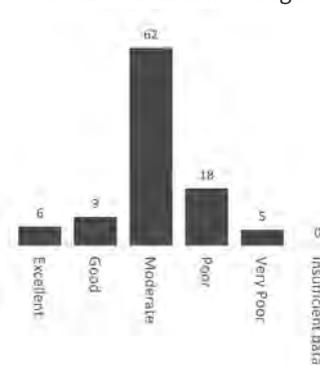
Waterway and wetlands resilience depends on strong government agency and broader community partnerships, underpinned by government investment. The extent and proportion of government investment needed varies for different aspects of waterway and wetland management, including different stages of maturity in capturing opportunities to manage risks. Since the early 1990s, Goulburn Broken CMA (and its predecessors) has actively promoted participation in agency-community partnerships to achieve better and more integrated management.

The Goulburn Broken catchment's communities have demonstrated the ability to self-organise and adapt to build resilience. Since 2000, responses to extreme changes that are relevant to waterway and wetlands resilience include innovative drought and fruit-industry employment and fire-recovery programs, the \$1 billion Foodbowl Initiative, and the Farm Water Program. Many community individuals who have been involved in Goulburn Broken CMA partnership forums are now active advocates for integrated management.

A step-change in integrated catchment management was achieved with the advent of Victorian CMAs in 1997, when these regionally-based organisations became responsible for managing land and waterways. Floodplain management responsibilities were also shifted from Melbourne to the CMAs in 1997.

Goulburn Broken CMA's evolving strategic approaches are listed in various documents, including updates and evaluations of the Regional Catchment Strategy and sub-strategies.

**Index of stream condition 2010**  
Goulburn Broken Basin  
Stream condition % length



## Long-term strategy implementation progress and 2022-23 performance

This section assesses progress in implementing Goulburn Broken Waterway Strategy 2014-2022 (GBWS) actions. While listed individually, in practice these actions are part of an integrated set working together to deliver the long-term goals of the strategy. Progress in implementing the strategy is shown against the critical attributes for long-term resilience that evolved since the strategy was developed. Implementation of many waterway strategy actions have been used to inform progress, with links to critical attributes being formalised over time.

Long-term strategy implementation progress	2022-23 performance
<p>Progress in building resilience via the five critical waterway attributes varies significantly, largely reflecting the maturity of interventions, budget constraints, or uncertain knowledge when setting targets.</p> <p>Actions have been achieved in accordance with funds provided each year.</p> <p>The trend of a move away from hard (and expensive) engineering approaches continues, towards soft engineering, involving working more with the changes, focusing on the long-term benefits desired and the most cost-efficient way of achieving them.</p> <p>Reviews of Goulburn Broken Waterway Strategies (in 2018 and 2022) indicate that the Goulburn Broken CMA's waterways program has responded well to unprecedented fires, floods and drought by securing funding and implementing recovery actions.</p>	<p>Actions to build resilience via the five critical attributes specific to waterways were undertaken to the level funded, in partnership with the community and agencies.</p> <p>Actions included fencing, revegetation, pest plant and animal control, improving instream woody habitat, water for the environment delivery, monitoring, employment, engagement and education.</p> <p>Improvements in strategic approaches were gained through the renewal of the RCS that will be incorporated in the renewal of the Regional Waterway Strategy, due to start in 2023-24.</p> <p>Delivery of the existing Strathbogie Streams flagship project continues as well as the early stages of a new flagship project on the mid Goulburn River where the approach is currently being actively scoped and delivered with TLaWC.</p>
<b>Streamflows and wetland inundation</b>	
<b>Undammed (unregulated) streams</b>	
<p>Goulburn Broken CMA has completed a number of technical studies (environmental flow determinations and streamflow management plans) on unregulated streams, including the Yea River, King Parrot Creek and Seven Creeks. They have sought to determine how available water can be sustainably shared between environmental and consumptive demands.</p> <p>In unregulated streams, water for the environment cannot be released to manage risks, such as when Macquarie Perch and Trout Cod were dying in the Seven Creeks due to low flow in March 2016.</p>	<p>The condition and extent of aquatic habitat was monitored along unregulated streams including the Hughes, Seven, Holland and King Parrot creeks during summer. The monitoring results were used to determine the need for management interventions to protect water quality and aquatic fauna. With favourable conditions (cooler and wetter), no management interventions were considered necessary.</p>
<b>Dammed (regulated) streams</b>	
<p>Since the early 2000s, with the assistance of partner organisations and input from the regional community, Goulburn Broken CMA has played a key role in delivering and managing water for the environment to maintain and enhance ecological values of rivers, floodplains and wetlands.</p> <p>Flow in the Goulburn River results from different delivery sources and methods. It can come from releases from Lake Eildon and Goulburn Weir, or from catchment run-off. Releases from Lake Eildon can supply water for human consumption, irrigation and environment needs.</p> <p>Water for the environment is extremely important in very dry periods, such as July to October 2016. The table on page 48 shows the annual volume of environmental water delivered within the Goulburn Broken catchment in the past 11 years.</p> <p>In recent years, Goulburn Broken CMA has managed the delivery of environmental water to the Goulburn River, Broken River, Broken Creek, Barmah Forest and a number of priority wetlands. This has improved water quality, promoted the growth and establishment of native vegetation, promoted and supported waterbird and native fish breeding, provided drought refuge for native fauna, provided habitat for native fish, frogs and water bugs, and reduced the growth of nuisance aquatic plants.</p>	<p>Over 400,000 megalitres of environmental water was delivered to support water quality, fish, macroinvertebrates, water birds, platypus, turtles and native vegetation in the Goulburn River, Broken River, Broken Creek, Barmah Forest and, Horseshoe Lagoon (in partnership with Taungurung Land and Water Council) (see tables on page 48 and 49).</p> <p>Significant environmental water deliveries and outcomes included:</p> <ul style="list-style-type: none"> <li>• Record breaking flood events across the catchment between October and December shifted the focus of environmental water deliveries.</li> <li>• A Goulburn River winter fresh to provide: platypus nesting cues; deposit seed and sediment on the banks; improve bank soil moisture; increase habitat and food resources for native fish and other aquatic fauna; and connect off-stream habitats (particularly along the mid Goulburn River).</li> <li>• Releases from Eildon were gradually stepped up as part of a trial to assess the influence of flow on instream and off-stream habitat availability.</li> </ul>

Long-term strategy implementation progress	2022-23 performance
Streamflows and wetland inundation (continued)	
Dammed (regulated) streams (continued)	<p>Significant environmental water deliveries and outcomes included (continued):</p> <ul style="list-style-type: none"> <li>• In early December unregulated flow down the lower Goulburn River began to fall quickly and poor quality water on the floodplain started to drain back into the river. This posed a risk to dissolved oxygen levels. As a precautionary action 200-300 ML/day of water from the Goulburn Water Quality Reserve was delivered to the lower Goulburn River from irrigation outfalls to provide local aquatic refuges. No significant fish deaths were recorded in the lower Goulburn River.</li> <li>• In the lower Broken Creek environmental water was delivered for a short time at the start of the irrigation season to provide spring low flows, before large unregulated inflows and natural flooding occurred over October and November. This generated hypoxic blackwater which resulted in the death of a large number of native and non-native fish. From early November to the end of December water from the Goulburn Water Quality Allowance and Murray River bypass water was delivered to the lower Broken and Nine Mile creeks between and after high unregulated flow events. The water was delivered via irrigation outfalls to provide aquatic refuges for native fish and other aquatic fauna. Native fish were recorded congregating at these sites.</li> <li>• Translucent Regulator operations occurred in July and August where regulators were open irrespective of river levels to divert some water through both Barmah and Millewa forests. The flows increased habitat and food resources for native fish and water birds and supported the growth of wetland vegetation. The watering action also increased flows and improved environmental outcomes downstream of Barmah-Millewa Forest in the Murray River channel and in the Edward-Wakool river system.</li> <li>• One hundred per cent of the Barmah-Millewa floodplain was inundated in spring following three large natural flood events. Moira grass responded exceptionally well to the flood events (especially where protected within feral horse exclusion fencing), which also stimulated bird breeding (cormorants, darters, ibis, spoon bills and egrets) at a number of different locations across the forest. A significant hypoxic blackwater event occurred following the large-scale natural spring flood events which resulted in native and non-native fish deaths.</li> <li>• Approximately 70 ML of environmental water was pumped into Horseshoe Lagoon in early August. TLAWC was engaged by Goulburn Broken CMA to manage the delivery. The planned delivery of environmental water to Black Swamp, Kinnairds Wetland, Gaynor Swamp and Kanyapella Basin was not required as they filled naturally from catchment runoff. Spring and summer baseflows in the upper Broken Creek were delivered using environmental water to maintain habitat for native fish and other aquatic fauna. The watering actions also aimed to improve water quality which was impacted by hypoxic blackwater generated by natural flood events.</li> <li>• Environmental water used to deliver an autumn fresh in the Broken River for the second time. The fresh increased habitat for native fish, platypus, macroinvertebrates and vegetation.</li> </ul>

Long-term strategy implementation progress	2022-23 performance
Streamflows and wetland inundation (continued)	
Dammed (regulated) streams (continued)	
	Water for the environment was delivered in accordance with VEWH processes, with assistance and cooperation of partners. Most priority watering actions were achieved at all sites.
Streamside (riparian) vegetation	
<p>Streamside vegetation implementation programs are at a late stage of maturity after 25 years of onground works and significant land tenure changes towards more passive uses.</p> <p>Since 1997, over 1728 kilometres of fences have been erected and approximately 12,151 hectares of riparian land have been protected and/or enhanced.</p>	<p>The implementation of onground works was hampered by the wet catchment conditions in winter-spring 2022 culminating in the October 2022 flood event.</p> <p>Despite this, and with more favourable conditions since summer, there have been over 200 hectares of streamside protection and improvement activities successfully completed, which includes native vegetation planting, riparian fencing and weed control works. This includes streamside protection activities, such as replacement fencing, supported by flood recovery funding.</p> <p>Goulburn Broken CMA has continued to improve its capacity and understanding in Taungurung Recognition and Settlement Agreement requirements, which is enabling and supporting improved delivery of onground works.</p>
Water quality	
<p>The Goulburn Broken Water Quality Strategy 1996-2016 was reviewed with key contributing partner organisations. The review indicated good progress toward targets and that no major change in direction was needed. The strategic focus on water quality for the region is now covered in the Goulburn Broken Waterway Strategy as one of the key components of waterway health. Institutional arrangements to manage water quality threats continue through several regional participant forums.</p>	<p>The Water Quality Forum continued monitoring the water quality conditions.</p> <p>Heavy rainfall and flooding in late 2022 led to hypoxic blackwater events in Barmah-Millewa Forest, the upper and lower Broken Creek and a short event in the lower Goulburn River. Large numbers of native and non-native fish died in Barmah-Millewa Forest and the lower Broken Creek as a result of the hypoxic blackwater. No significant fish deaths were recorded in the lower Goulburn River and the upper Broken Creek. Future fish population monitoring will help assess the impact.</p>
Fish passage and habitat	
<p>Goulburn Broken CMA has focused on resnagging waterways to improve instream habitat. Approximately 3027 instream habitat structures, including large wood and rock, have been added to priority waterways since 2011 (until the end of 2022-23), including the Goulburn River, Broken Creek, Hughes Creek, Seven Creeks, Holland Creek, Howqua River and Tahbilk Lagoon.</p>	<p>Instream habitat works occurred on Hughes Creek, with placement of snags to extend connectivity with previous site works. A trial also commenced to improve Macquarie Perch habitat by testing how well instream vegetation (sedge species) colonises and stabilises sand beds in a reach of Hughes Creek.</p> <p>The October 2022 floods resulted in significant impacts to instream habitat in waterways like Hughes Creek, including damage to previous site works such as large wood and loss of instream vegetation.</p> <p>However, the floods also saw additional opportunities arise to repurpose timber salvaged during the floods, for example tree falls. There is also continuing strong support and interest, as well as financial contributions, from recreational fishing groups to undertake habitat improvement works.</p> <p>Despite the wet and flooding conditions, new instream habitat works occurred in Goulburn River and lower Broken Creek, with placement of large wood at several sites. In the lower Broken Creek this resnagging work was done in conjunction with the creation of habitat pools for native fish.</p>

**Community capacity to be involved and act onground – long-term strategy implementation**

Although local and regional agency and broader community partnerships are strengthening, the capacity to manage waterways for regional priorities is becoming challenging because of often competing priorities from other parts of the southern-connected Murray-Darling Basin.

Specific activities that build community capacity to influence and lead decision-making and act onground are detailed within each annual report, including this one.

This year proved difficult for community action and partnering due to the significant flood events of late 2022.

**Landholder grants uptake and ongoing participation**

Landholders who implemented streamside works between 1993 and 2022 through Goulburn Broken CMA are generally very satisfied with the support provided and outcomes, with most voluntarily maintaining sites (Glassford 2023).

**Traditional Owners**

Traditional Owner partnering in planning and undertaking onground works and environmental water delivery continues to grow strongly.

Traditional Owners are also more involved in policy development and setting priorities, although significantly more efforts are needed to build ongoing and consistent involvement, which requires more resources (especially at the TO end). (See also page 36.)

**Environmental water advisory groups**

Goulburn Broken CMA has established three community and partner agency stakeholder advisory groups to advise on plans for using water for the environment. The Wetland Management Group was established in 2008 and the Goulburn and the Broken Environmental Water Advisory Groups were established in 2012. Membership and operation continue to be reviewed to ensure they are effective.

**General community understanding and participation (waterways)**

In the last few years, several individuals and community stakeholder groups have become advocates for waterway and wetlands management activities and have led the way by actively participating. Ninety per cent of Goulburn Broken catchment residents surveyed are aware of Goulburn Broken CMA's role in 'managing waterways', according to a biennial statewide survey. When asked which Natural Resource Management issues were of the most importance, without prompting with suggestions, 'water quality' and 'drought' were both leading issues, with large increases from 2012, while 'protecting wetlands', 'sustainability', and 'salinity management' also had increased ratings. Other surveys such as 'My Victorian Waterways' and University of Canberra's 'Regional wellbeing survey' also inform decisions.

**Goulburn Broken CMA and DEECA (waterways) partnership**

Goulburn Broken CMA waterway staff view their partnership with DEECA's waterway staff very favourably.

They cite the value of clear understanding by Goulburn Broken CMA and DEECA waterway staff of their complementary roles and responsibilities, nurtured by ongoing commitment to long-term relationships for a common cause. This is despite often significant and frequent demands on both parties.

**Goulburn Broken CMA and regional agency partnerships**

Regular Goulburn Broken CMA survey results indicate that partnerships are meeting or exceeding expectations in all areas. Most of these partnerships have direct applicability to river and wetland health outcomes.

**Implementation of priority actions**

Priority actions listed in the Goulburn Broken Waterway Strategy 2014-2022 were implemented. Future priorities will be developed in the renewal process in the next year or two.

**Community capacity to be involved and act onground in 2022-23**

The Broken and Goulburn Environmental Water Advisory Groups and the Goulburn Broken Wetland Advisory Group continued to meet, including via video meetings. These groups guide water for the environment planning, use, monitoring and complementary works. The groups are comprised of agency, and interest group representatives such as recreational fishers.

The Lower Goulburn flow MER working group consists of representatives from Yorta Yorta Nations Aboriginal Corporation, government agencies, researchers and community members.

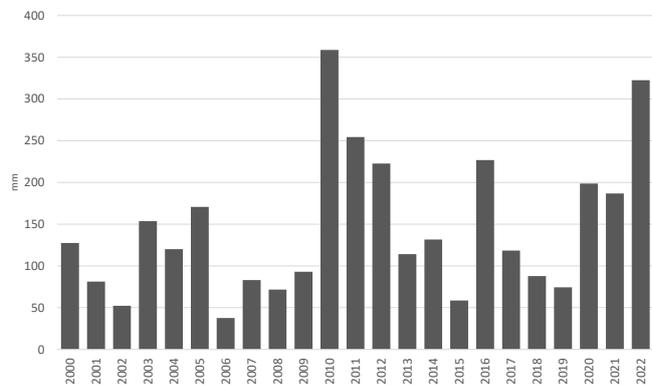
Activities to improve the health of Barmah-Millewa Forest included the coordination of a Barmah Forest Ramsar Site Coordinating Committee (which guides the implementation of site management plan priorities) and a Barmah-Millewa Operations Advisory Group (which guides environmental water management in the Barmah and Millewa Forests).

Annual monitoring of the threatened Superb Parrot population is carried out by the local Superb Parrot Group.

The thirteenth Floodplain Ecology Course was successfully held at Barmah during October, managed by the Goulburn Murray Landcare Network and Goulburn Broken CMA, with 24 participants attending the five-day course funded by the Australian Government's Regional Landcare Program.

RiverConnect, which promotes the Goulburn and Broken rivers as the heart and soul of the Shepparton-Mooroopna community, continued to be supported. Significantly, a review of the Strategic Plan was completed.

**Annual river inflow Goulburn Broken catchment<sup>1</sup>, mm**



i. Total surface and subsurface runoff into the river(s), estimated by the OzWALD model data fusion system. Source: Centre for Water and Landscape Dynamics, Australian National University. [www.ausenv.online](http://www.ausenv.online)

## Monitoring, research and development, and adapting management in 2022-23

Goulburn Broken CMA maintains close relationships with research organisations, government investors, and sister-implementation agencies across the country to ensure onground and other actions are implemented according to the best science and appropriate standards. Goulburn Broken CMA participates in various statewide working groups involving policy, implementation and monitoring.

Activities in this area included:

- monitoring of threatened species continued and included monitoring of Macquarie Perch in the Holland, King Parrot, Seven and Hughes creeks
- monitoring of the use of environmental water on the lower Goulburn River; and
- monitoring of the ecological character of the Barmah Forest Ramsar site.

The Living Murray program (TLM) continued to fund a range of activities to improve the health of Barmah-Millewa Forest including monitoring the ecological response of birds, fish, crayfish, frogs, turtles and vegetation to delivery of water for the environment.

In addition to the TLM program, the Barmah Forest Ramsar site program undertakes research and monitoring to assist management better understand and improve the status of

critical components, processes and services that have been identified as defining the Site's ecological character.

The Australian Government funded program called Flow-Monitoring Evaluation and Research monitored native fish, macroinvertebrates, vegetation, geomorphology and ecosystem metabolism responses to environmental water management in the lower Goulburn River. The program is an extension of the five-year Goulburn River Long Term Intervention Monitoring Program which finished in June 2019 with increased focus on research to fill knowledge gaps.

Vegetation, waterbird and frog responses to the delivery of environmental water and natural inflows were monitored at the following sites: Reedy Swamp, Moodie Swamp, Black Swamp, Doctors Swamp, Gaynor Swamp, Horseshoe Lagoon, Kinnairds Wetland, Kanyapella Basin and Loch Garry. The monitoring was undertaken by DEECA as part of a statewide wetland monitoring program (Wetland Monitoring and Assessment Program - WetMAP) and Goulburn Broken CMA staff.

Ongoing data collection of water quality parameters continued through the North East Water Quality monitoring partnership.

Passive Integrated Transcoder tag readers at seven fishway locations continued to be operated to assist in developing a better understanding of fish movement within the region and beyond.

## Environmental water use

Wetland or stream	Volume, ML <sup>i</sup>										
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Barmah-Millewa Forest (Vic and NSW) <sup>ii</sup>	2,959	363,086	0	437,395	254,188	414,010	172,789	361,000	377,603	410,626	204,370
Black Swamp	0	50	0	80	0	0	80	65	0	80	0
Lower Broken Creek	41,230	38,593	34,306	30,319	36,192	41,408	27,633	35,777	33,694	69,915	50,810
Upper Broken Creek	51	0	387	0	0	0	0	597	1,235 <sup>iii</sup>	1,247	1,146
Broken River	0	0	0	0	0	1000	250	258 <sup>iii</sup>	23 <sup>iii</sup>	510	2,502
Doctors Swamp	0	0	0	594	0	0	0	67	0	427	0
Goulburn River (downstream of Goulburn Weir)	255,427	312,349	304,125	228,252	193,272	354,832	247,268	373256	214,625	361,340	222,539
Goulburn River (downstream of Lake Eildon)										86,088	913
Kinnairds Wetland	0	179	0	696	0	0	386	259	0	195	0
Moodie Swamp	0	121	500	500	0	500	0	0	0	1,006	0
Reedy Swamp	0	0	0	475	0	0	500	500	0	0	0
Gaynor Swamp	0	0	0	0	0	500	600	0	994	901	0
Loch Garry	0	0	0	0	0	0	0	500	0	980	0
Horseshoe Lagoon	0	0	0	0	0	0	0	121	17	52	70
Kanyapella Basin	0	0	0	0	0	0	0	0	500	1,000	0
<b>TOTALS</b>	<b>299,667</b>	<b>714,378</b>	<b>339,318</b>	<b>698,311</b>	<b>483,652</b>	<b>812,250</b>	<b>449,506</b>	<b>772,400</b>	<b>628,691</b>	<b>934,367</b>	<b>482,349</b>

i. Final volumes might vary slightly and are reconciled following publication of this annual report.

ii. Generally, the water is equally shared between the Barmah and Millewa Forests. Greater than 80 per cent of the water delivered to the Barmah-Millewa forest returns to the Murray River.

iii. In accordance with the Broken System Bulk Entitlement, between May and December 2019 the Goulburn Broken Catchment Management Authority and Goulburn-Murray Water agreed to reduce the passing flow requirement below Lake Nillahcootie from 30 ML/day or natural to 15 ML/day or natural and banked inflows above 15 ML/day. This water was used to maintain minimum baseflow requirements in the Broken River and upper Broken Creek.

## Environmental water used during 2022-23

System	Quantity, ML	Source
Water used WITHIN the Goulburn Broken catchment		
Goulburn River (downstream of Goulburn Weir)	167,425	Commonwealth Environmental Water – Goulburn River system
	37,510	The Living Murray Water – Goulburn River system
	15,098	Victorian Environmental Water – Goulburn River system
	2,506	Goulburn River Water Quality Allowance – Goulburn River system
Goulburn River (downstream of Lake Eildon)	457	Commonwealth Environmental Water – Goulburn River system
	0	The Living Murray Water – Goulburn River system
	457	Victorian Environmental Water – Goulburn River system
Lower Broken Creek	29,455	Commonwealth Environmental Water – Goulburn River system
	0	Victorian Environmental Water – Goulburn River system
	3,317	Goulburn River Water Quality Allowance – Goulburn River system
	18,039	Commonwealth Environmental Water – Murray River system
	0	Victorian Environmental Water – Murray River system
Barmah-Millewa Forest	65,177	Commonwealth Environmental Water (CEW) – Victoria and NSW
	30,008	The Living Murray allocation (TLM) – Victoria and NSW
	0	Barmah-Millewa Forest Environmental Water Allocation – Victoria and NSW
	2,000	Victorian Environmental Water – Murray River system
	5,000	River Murray Increased Flows (RMIF) – Victoria and NSW
	102,185	NSW (CEW, TLM and NSW Environmental Water)
Upper Broken Creek	573	Victorian Environmental Water – Broken River system
	573	Commonwealth Environmental Water – Broken River system
Broken River	1,575	Victorian Environmental Water – Broken River system
	927	Commonwealth Environmental Water – Broken River system
Black Swamp (Nine Mile Creek)	0	Victorian Environmental Water – Goulburn and Murray River systems
Kinnairds Wetland (lower Broken Creek)	0	Victorian Environmental Water – Goulburn and Murray River systems
Reedy Swamp (lower Goulburn River)	0	Victorian Environmental Water – Goulburn River system
Doctors Swamp (lower Goulburn River)	0	Victorian Environmental Water – Goulburn River system
Loch Garry (lower Goulburn River)	0	Victorian Environmental Water – Goulburn River system
Horseshoe Lagoon (mid Goulburn River)	70	Victorian Environmental Water – Goulburn River system
Kanyapella Basin (lower Goulburn River)	0	Victorian Environmental Water – Goulburn River system
Moodie Swamp (upper Broken Creek)	0	Victorian Environmental Water – Broken River system
	0	Commonwealth Environmental Water – Broken River system
Gaynor Swamp (Corop)	0	Victorian Environmental Water – Goulburn River system
Water used DOWNSTREAM that benefited waterways in the Goulburn Broken catchment		
Murray River	28,111	Inter-Valley Transfers (Goulburn River) <sup>i</sup>
	32,286	The Living Murray allocation (Goulburn River)
	0	Inter-Valley Transfers (lower Broken Creek) <sup>i</sup>
	3,705,296	Lower Goulburn River Unregulated Flows and Operational Releases
	276,113	Lower Broken Creek Unregulated Flows and Operational Releases

i. Inter-valley transfers are not considered to be environmental water but can provide environmental benefits. These volumes are not included in total environmental water use figures.

## Waterways onground Actions 2020-21, 2021-22 and 2022-23

Action	From funds received through Corporate Plan					
	Achieved <sup>i</sup>			Target	% achieved	
	2020-21	2021-22	2022-23			
<b>Stock grazing action</b>						
Fence riparian land (= wetland + stream/river remnant below)	ha	153	94	42	-	
Fence wetland remnant	ha	-	4	-	-	
Fence stream/river remnant <sup>ii</sup>	ha	153	90	42	-	
Fence stream/river remnant	km	36	19	21	16	132
Off-stream watering	no.	32	10	2	7	29
<b>Nutrient-rich and turbid water and suspended solids action</b>						
Stormwater management projects <sup>iii</sup>	no.	-	-	-	-	
<b>Instream and near-stream erosion action</b>						
Bank protection actions	km	-	-	0.04	-	
Instream and tributary erosion controlled	km	-	-	-	-	
<b>Changed flow-pattern action</b>						
Environmental water use <sup>iv</sup>	ML	628,691	934,367	482,349	-	
<b>Weed invasion action</b>						
Weeds – aquatic weeds controlled (managed)	km	8	-	40	-	
<b>Habitat loss management</b>						
Rock ramp fishway	no.	-	-	-	-	
Fish barrier removal	no.	-	-	-	-	
Instream habitat <sup>v</sup>	no.	20	-	10	164	6
<b>Surface water action <sup>vi</sup></b>						
Drain - primary built <sup>vii</sup>	km	55	-	48	-	
Drain - community built	km	-	-	-	-	
Farm reuse systems installed <sup>viii</sup>	no.	-	-	-	-	
High flow drain diversion - high nutrient water removed <sup>ix</sup>	ML	-	-	-	-	
Irrigation systems - improved <sup>x</sup>	ha	4,947	719	1,453	-	

- i. Achievements include those from investment areas: Waterways and complementary investment areas (Sustainable irrigation, Land, and Biodiversity). Outputs delivered through each fund source are available from the Goulburn Broken CMA.
- ii. Area figure supplied by River and Wetland Health Program Manager.
- iii. Stormwater management projects are undertaken on a one-to-one funding basis with local government.
- iv. Target cannot be set with any confidence because achievement is prone to extreme variation, being affected by climatic and seasonal conditions. Volumes used since 2000-01 were reconciled in 2014 and some figures were adjusted. The NSW component of water delivered to Barmah Forest is included in these figures.
- v. Output included for the first time in 2015-16 as 'instream woody habitat - snags'. Updated to 'instream habitat' in 2017-18 to include other habitat structures undertaken in 2017-18 such as groynes and rock seeding.
- vi. Surface water management enables the removal of excess rainfall runoff from irrigated lands, alleviating soil salinity. As part of an overall management plan for nutrients, nutrient loads are managed by collecting and reusing water from drains. Nutrient loads are monitored against the Goulburn Broken Water Quality Strategy nutrient target for drains.
- vii. Fencing and laneways are relocated along primary drains to control stock. Drains are also hydromulched and seeded to provide vegetative cover on bare batters.
- viii. Reuse dams allow for the collection of high nutrient runoff and reirrigation, reducing the water and nutrient loads leaving the farm.
- ix. High flow diversion. None completed because of no demand and previous dry conditions.
- x. Assumptions: From 2014-15, area improved = laser levelling (which itself includes an assumption based on whole farm plan area - see footnote iv) + pressurised irrigation systems (micro or drip + sprinkler).

## What's next?

### Strategic priorities:

Implementation of the intent of Goulburn Broken Waterway Strategy (GBWS) 2014-2022, in partnership with regional agencies and the community, will continue although renewal of the strategy is expected to begin in 2024. The recently completed final review and its actions will drive the focus of effort until its renewal. Strategic priorities that emerged from the review are :

***1 Give effect to priorities in First Nations Country Plans and strengthen Traditional Owners influence in all stages of waterway management.***

This requires continued improvements in relationships, understanding, acknowledgement and inclusion of Traditional Owner knowledge, culture and values. Traditional Owners' NRM-related plans and strategies will provide some direction. This strategic priority aligns with the six-year priority in the Goulburn Broken RCS 2021-27.

The priority is expected to be reviewed as part of the 2024 GBWS renewal.

**2 Make it easier for community members to influence strategic directions by framing high-level goals in a way that helps communicate links between long-term intent, annual actions, and progress.**

Goulburn Broken CMA will contribute to the 2023 renewal of the Victorian Waterway Management Strategy (VWMS), which includes the review of regional waterway management and associated renewal of guidance for regional waterway strategies. Goulburn Broken CMA will advocate for community influence in strategy development and implementation. West Gippsland CMA's program logic might be a useful model to support.

**3 Maximise the environmental value of water from all sources, particularly water for the environment, and provide complementary cultural, social and economic benefits, where possible.**

Decisions on sharing and managing water need to factor in the impact of climate change on wetlands and all waterways, both regulated and unregulated.

GBWS renewal will be an opportunity to engage widely with the community and strengthen and broaden relationships. This will enable waterway management to be informed by current values and interests and to be improved by greater stakeholder ownership of strategy delivery.

This will also include contributing to regional processes and beyond that impact on environmental water management, such as the VWMS, the Murray-Darling Basin Plan and Sustainable Water Strategy renewal.

**4 Refine streamside vegetation programs as the need for new fencing nears its end-point on major streams.**

**Operational priorities are:**

**1 From the GBWS 2014-2022 reviews, identify relevant actions for considering in 2023 when renewing the GBWS.**

**2 During GBWS renewal, consider increased targeting in stream-frontage works.**

This relates to strategic priority 4 and also aligns with requirements of the Environmental Contributions Tranche 5 (EC5) process.

**3 Increase collaboration in management of Barmah Forest.**

Site management plans are likely to sit outside the GBWS and will therefore rely on processes and relationships between those with a role in the management of Barmah Forest. An updated Barmah-Millewa Environmental Water Management Plan was prepared in June 2023 but has yet to be formally considered by the MDBA for acceptance.

**4 Continue to use the analogy of rivers being just like roads, needing funding for both maintenance and improvement.**

**5 During GBWS renewal, consider the role of environmental water alongside other tools to meet objectives.**

The Strathbogie streams flagship waterways project is proposed to continue to focus on the Seven Creeks and Hughes Creek, and other streams flowing from the Strathbogie Ranges will be also targeted through the riparian works program. Priority waterways including the Goulburn River, are also proposed to be targeted.

Opportunities for multiple uses of environmental water will continue to be explored with neighbouring CMAs, the

Victorian and Commonwealth Environmental Water Holders, the Murray-Darling Basin Authority, Traditional Owners and the community.

Seasonal watering proposals for 2023-24 aim to use water for the environment to protect and improve the ecological values of waterways for positive ecological achievement outcomes by:

- providing flows in the lower Broken Creek to provide native fish passage, increase native fish habitat during the migration and breeding seasons, and manage threats to native fish from low dissolved oxygen levels or excessive Azolla growth
- providing low flows in the Broken River and upper Broken Creek to provide habitat for native fish, macroinvertebrates, instream vegetation and platypus
- providing low flows and freshes in the lower Goulburn River to provide habitat and recruitment opportunities for native fish, macroinvertebrates and native vegetation, and support geomorphic processes and nutrient cycling
- provide low flows and freshes in the mid Goulburn River to connect off-stream habitats and provide habitat for instream vegetation, macroinvertebrates and native fish.
- promoting the growth and establishment of Moira grass and supporting colonial waterbird breeding in Barmah Forest
- delivering environmental water to Doctors Swamp and Horseshoe Lagoon to promote the growth of native vegetation communities and support waterbird and frog breeding
- promoting the drying of Gaynor Swamp, Reedy Swamp, Moodie Swamp, Loch Garry, Kanyapella Basin, Kinnairds Wetland and Black Swamp.

Goulburn Broken CMA will continue to support implementation of the Flow-Monitoring Evaluation and Research Program in the Goulburn River and the development and implementation of the Victorian river and wetland monitoring and assessment programs (VEFMAP and WetMAP).

Opportunities to better manage water transfers down the lower Goulburn River and lower Broken Creek will continue to be investigated and implemented further with DEECA and partners through the implementation of the final Goulburn to Murray Trade Review recommendations.

Goulburn Broken CMA will work with Traditional Owners, DEECA and other partners to support the delivery of the Water is Life: Traditional Owner Access to Water Roadmap, which aims to strengthen the role of Traditional Owners in water planning and management.

Goulburn Broken CMA will continue to support Stage 1A of the Victorian Constraints Measures Program. The program aims to achieve more efficient and effective use of environmental water in the Goulburn and Murray rivers by reducing physical and operational delivery constraints.

Activities for the years 2023-24 will be implemented through the final year of the Environmental Contributions Levy Tranche 5.

Opportunities and obligations from the Taungurung Recognition and Settlement Agreement will continue to be identified and enacted.

## Investment area – Floodplain management

Compiled by Guy Tierney and Joel Leister.

### Long-term and annual scorecard <sup>i</sup>

2022-23 performance	On target
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Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
			<b>MEDIUM</b>

There have been significant floodplain management improvements across the catchment, with further improvements currently underway.

As more infrastructure occurs within floodplains, flood impacts potentially increase. However, through floodplain management tools, the annual average damages do not unduly increase and community preparedness and education of flood risk improves.

The influence of climate change on rainfall patterns, and therefore the flood behaviour, is being observed across the catchment. Current studies are including allowances for these changes in the project outputs.

The 2022 floods tested flood study outputs and planning decisions. They also assessed community preparedness and response to flooding.

The 2022 floods have triggered numerous reviews and increased government focus on flooding. This may lead to changes in future floodplain management.

Resilience assessment					Long-term strategic implementation <sup>v</sup>		
Critical attribute affecting long-term catchment health <sup>iii</sup>	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>			Start	Stage
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>		
Flood impact			—	<b>MEDIUM</b>	<b>VERY HIGH</b>	2002	Late

Certainty of rating is High. Flood intelligence translated into accessible community flood intelligence portal, municipal flood emergency plans and planning schemes, local flood guides. Total flood warning systems provide access to improved timeliness of warnings. Flood mitigation implementation programs in detailed design phase. Application of sound floodplain management principles applied to new land-use and development applications.

- Appendix 1 describes the analytical framework. Ratings legend is inside front cover.
- Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators on higher level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.
- System is Floodplain; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- Risk that system will not be in desired state of resilience in long-term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- Long-term strategies vary significantly in formality: 'start' approximates when holistic, integrated approach to influencing critical attribute began.
- Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.

### Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
1,025	868	1,637	840

- Budget is based on the Corporate Plan 2023-24.

### Strategic references

- Victorian Floodplain Management Strategy (2016)
- Goulburn Broken Regional Floodplain Management Strategy 2018-2028 (RFMS)
- Planning and Environment Act 1987*
- Subdivision Act 1988*
- Building Regulations 2018*
- Water Act 1989*
- Minerals and Resources (Sustainable Development) Act 1990*
- Environment Protection Act 1970*

### Background

The amount of damage a flood causes depends on its size. The annual average damage (AAD) is what would be expected in a flood-prone area, considering fluctuations over many decades. Goulburn Broken CMA inherited the highest AAD of all Victorian CMAs outside Melbourne Water's area of responsibility for floodplain management (Victoria Flood Management Strategy 1998).

Floodplain management functions are delegated to Goulburn Broken CMA (*Water Act 1989* Section 202) and include advising local councils, Department of Energy, Environment and Climate Action's Secretary, and the community about flooding and controls on development. Without floodplain management, flood impacts potentially increase if infrastructure, buildings and assets are placed within floodplains without floodplain planning at a statutory and strategic level.

Engineering techniques such as hydrology (the study of rainfall and runoff) and hydraulics (the applied science of water movement across floodplains, rivers, streams

and stormwater networks) assist understanding of flood behaviour and impacts from floods on urban and rural communities. These techniques also help understanding of environmental flow regimes of waterway and wetland systems.

Flood studies provide a sound understanding on flood behaviour (flood extent, elevation, depth, velocity and hazard) and flood risk (likelihood and its associated consequences) that are paramount to inform potential flood mitigation and management options. Such options include structural solutions, e.g. levees, retardation basins and floodways, and non-structural solutions (flood warning, awareness and education programs, emergency management arrangements and land-use planning controls).

### Catchment condition - Floodplain management (since 1990)

*Long-term objectives: High-level objectives have been reset and 10-year prioritised actions have been developed with stakeholders following the 2018 release of the regional floodplain management strategy. Goulburn Broken CMA objectives relate to reducing annual average damages (\$), social trauma and property loss, and improving natural environment flooding patterns.*

The vision of the Goulburn Broken Regional Floodplain Management Strategy 2018-2028 (RFMS) is: 'Through partnerships, improve the flood resilience of the catchment's people, infrastructure, land, water and biodiversity'.

Implementation of the RFMS is on schedule, building on significant floodplain management improvements in many geographic areas since 1990. AAD and social trauma have decreased significantly through improved flood-intelligence sharing (community flood intelligence portal and emergency management), flood mitigation and land-use planning.

### Long-term strategy implementation

Four cross cutting RFMS programs deliver the vision, aiming to:

- **Build community resilience:** encourage communities to responsibly manage their own risks (as part of the Total Flood Warning System program) by improving accessibility to fit for purpose flood intelligence for the community (community portal and local flood guides).
- **Reduce legacy flood risk:** minimise flood-hazard exposure and consequences (part of all four programs – flood mitigation works, total flood warning systems (TFWS), land-use planning, and municipal flood emergency plans (MFEP)).
- **Avoid future flood risk:** do not make things worse (part of the land-use planning program).
- **Manage residual flood risk:** by integrated flood-intelligence sharing with emergency services, interpretation at incident control (part of the MFEP and TFWS programs) and flood insurance (part of the TFWS program).

Implementation program	Long-term progress
Flood mitigation works	<p>Using local, Victorian and Australian government grants, authorities are implementing recommendations of several flood studies and floodplain management plans, including structural and non-structural works. It is accepted that tasks completed result in reduced flooding impacts on the built environment and its peoples. Functional and detailed designs are progressing for flood mitigation works at three urban centres (Numurkah, Cobram and Violet Town).</p> <p>Implementation is opportunistic through Australian and Victorian Government incentives, such as the Risk and Resilience Grants Program. The Katandra West and Winton Flood Scoping Studies were successful in obtaining funding through the Risk and Resilience Grants Program. The Numurkah Northern Flood Levee was successful in obtaining a \$2.383 million grant through the National Flood Mitigation Infrastructure Program to construct a levee along the northern side of Broken Creek.</p>
Total flood warning systems	<p>Recently significant augmentation of the rain and stream gauge network has been implemented for the Broken-Boosey Catchment and flood warning services are now provided to Nathalia, with a limited flood warning service for Numurkah (awaiting further testing for finalisation).</p> <p>Since 2000, other flood prediction services are in place for Benalla, Euroa, Shepparton-Mooroopna, and Seymour. Local Flood Guides have been prepared for many communities in the Goulburn Broken catchment. The Goulburn Broken Community Flood Intelligence Portal was expanded to include at-risk communities in Seymour. The urban centres of Yea and Shepparton East have been included in the Portal over the last 12 months.</p>
Land-use planning	<p>A total of 58 studies have been completed since 1997 and nine are underway (Goulburn Broken Rivers, Sunday Creek catchment, Jamieson, Boosey and Upper Broken Creeks, Dabyminga Creek, Winton, Tallygaroopna and Alexandra). All local government authorities have flood zone and overlay controls within the Goulburn Broken catchment with most having incorporated decision criterion with respective planning schemes. As new studies are finalised opportunities to incorporate flood mapping into planning schemes will be implemented. Currently, Goulburn Broken CMA is working with councils and Department of Transport and Planning (DTP) to include amended and new flood overlay controls at 11 urban centres.</p>
Municipal flood emergency plans	<p>Since 2009-10, there have been continued gains and support in the statewide FloodZoom (flood intelligence system) to assist with emergency management (and land-use planning), and significant gains with the standard statewide format of Municipal Flood Emergency Plans.</p>

## 2022-23 performance

### Community capacity, engagement and involvement

Community engagement is an integral part of floodplain management through flood studies and floodplain management plans and their implementation, assisted by several government agencies. Goulburn Broken CMA currently manages and hosts the Flood Victoria website on behalf of the Victorian Government.

The table below provides a summary of the studies and implementation plans progressed for 2022-23. All studies are carried out under a partnership approach with local government, Victorian and Australian government agencies and local communities. Implementation of the recommendations is a shared responsibility. Civil works such as town levee construction generally rest with local government.

A key initiative is capacity building to implement strategic work and action arising from both the Victorian and Regional Floodplain Management Strategies.

### 2022 Spring Floods

Many towns across the catchment experienced their biggest floods since 1916, including Seymour, Murchison and Shepparton-Mooroopna. Goulburn Broken CMA provided the flood intelligence role supporting VICSES at the Incident Control Centre to assist with managing the floods, and supporting communities with flood information before and during the floods. Other major floods occurred along the Broken and Murray Rivers and to a lesser extent through the Granite Creeks region. The demand on Goulburn Broken CMA resources were required for three months.

### Flood studies and implementation plans for 2022-23

Project name	Lead agency	Status
Flood Mitigation Work Program: Priority actions 22 (9 high, 8 medium, 5 low). Status: 3 completed, 2 ongoing		
Cobram East Flood Mitigation Functional Design	Moira Shire Council	High priority. Several mitigation options have been developed and presented. A community reference group is guiding this project.
Numurkah Functional Design for Flood Mitigation Works	Moira Shire Council	High priority. Funding obtained via the National Flood Mitigation Infrastructure Program to fund the construction of the Northern Town Levee (Stage 1).
Total Flood Warning Systems: Priority actions 47 (16 high, 14 medium, 17 low). Status: 5 completed, 10 ongoing		
Numurkah	Moira Shire Council	High priority. Following the completion of augmentation of rain and stream gauges, the Bureau of Meteorology has developed preliminary flood prediction services to Numurkah, which will be refined with future hydraulic flood analysis and actual floods.
Granite Creeks Regional Flood Mapping Project (Hume Freeway to the Goulburn River)	DEECA (was DELWP)	Low priority. Study has been completed. Local Flood Guides to be prepared. Ongoing, expected completion June 2024.
Yea River Flood Intelligence Project Study	Goulburn Broken CMA	High priority. Study completed. Local Flood Guide to be prepared. Ongoing, expected completion June 2024.
Whiteheads Creek Floodplain Management Study	Mitchell Shire Council	High priority. Study Complete. Local Flood Guide to be prepared. Ongoing, expected completion June 2024.
Flood Study of the Goulburn and Broken Rivers	Goulburn Broken CMA	High priority. Model being calibrated to the Spring 2022 Flood Event. Ongoing, expected completion December 2023.
Sunday Creek Catchment Flood Intelligence and Mapping Study	Mitchell Shire Council	Medium priority. Model being calibrated to the Spring 2022 Flood Event. Ongoing, expected completion December 2023.
Boosey and Upper Broken Creeks Flood Study	Moira Shire Council	High-Medium priority. Ongoing, expected completion Dec 2023.
Jamieson Flood Study	Goulburn Broken CMA	Low Priority. Ongoing.
Howqua River Flood Study	Goulburn Broken CMA	Low priority. Ongoing.
Dabyminga Creek Flood Study	Goulburn Broken CMA	Low priority. Ongoing.
Land-use Planning: Priority actions 68 (28 high, 18 medium, 21 low, 1 very low). Status: 8 completed, 18 ongoing		
Nagambie Flood Study	Strathbogie Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Euroa Flood Intelligence and Flood Mapping Study	Strathbogie Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Violet Town Floodplain Management Study	Strathbogie Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Kilmore Flood Mapping and Intelligence Study	Mitchell Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.

Project name	Lead agency	Status
Kyabram Flood Study	Campaspe Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Flowerdale Flood Zone and Overlays	Murrindindi Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Hydrology of the Acheron catchment (Marysville, Buxton and Taggerty)	Goulburn Broken CMA	Medium - High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Shepparton East Overland Flood Study	Goulburn Broken CMA	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Shepparton Mooroopna Flood Mapping and Intelligence Study	Greater Shepparton City Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Whiteheads Creek Floodplain Management Plan	Mitchell Shire Council	High priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Flood Study of the Goulburn and Broken Rivers	Goulburn Broken CMA	Medium priority. Study in progress. Flood overlays to be prepared once study is complete. Ongoing.
Sunday Creek Catchment Flood Intelligence and Mapping Study	Mitchell Shire Council	High priority. Study in progress. Flood overlays to be prepared once study is complete. Ongoing.
Granite Creeks Regional Flood Mapping Project (Hume Freeway to the Goulburn River)	DEECA (was DELWP)	Low priority (Study complete). Goulburn Broken CMA working with Council and DTP to amend Planning Scheme. Ongoing.
Upper Broken and Boosey Creeks Flood Study	Moira Shire Council	Medium priority. Study in progress. Flood overlays to be prepared once study is complete. Ongoing.
Winton Flood Scoping Study	Benalla Rural City Council	Medium priority. Ongoing, expected completion by June 2024
Katandra West Flood Scoping Study	Greater Shepparton City Council	High priority. Study complete
Tallygaroopna Flood Scoping Study	Greater Shepparton City Council	Medium priority. Ongoing, expected completion by June 2024
Alexandra Flood Scoping Study	Murrindindi Shire Council	Medium priority. Ongoing, expected completion by June 2024
<b>Municipal Flood Emergency Plans: Priority actions 69 (20 high, 25 medium, 23 low, 1 very low). Status: 9 completed, 9 ongoing</b>		
Granite Creeks Regional Flood Mapping Project (Hume Freeway to the Goulburn River)	DEECA (was DELWP)	Medium priority. Study Complete. MFEP update underway. Ongoing, expected completion June 2024.
Yea River Flood Intelligence Project Study	Goulburn Broken CMA	High priority. MFEP requires a revision based on new gauge. Ongoing, expected completion June 2024.
Whiteheads Creek Floodplain Management Study	Mitchell Shire Council	High priority. See TFWS for commentary. MFEP required an update following completion of the report. Ongoing, expected completion June 2024.
Flood Study of the Goulburn and Broken Rivers	Goulburn Broken CMA	Low priority. This is across five LGAs where each MFEP will require revisions. Study in progress.
Sunday Creek Catchment Flood Intelligence and Mapping Study	Mitchell Shire Council	High priority MFEP update required following completion of study. Study in progress.
Upper Broken and Boosey Creeks Flood Study	Moira Shire Council	Medium priority. MFEP update required following completion of study. Study in progress.
Kyabram Flood Study	Campaspe Shire Council	Medium priority. MFEP update required following completion of study. Ongoing, expected completion June 2024.
Nagambie Flood Study	Strathbogie Shire Council	High priority. Flood study has been completed. Flood intelligence to be included in Strathbogie MFEP. Ongoing, expected completion June 2024.
Violet Town Flood Study	Strathbogie Shire Council	High priority. Flood study has been completed. Flood intelligence to be included in Strathbogie MFEP. Ongoing, expected completion June 2024.
<b>Whole of region: Priority actions 10 (6 High, 4 Medium). Status: 1 completed, 1 ongoing</b>		
Undertake exercising MFEPs	VICSES	High priority. Annually.

### Mid-term review and update to the Regional Floodplain Management Strategy

Goulburn Broken CMA is coordinating a review of progress of actions to date, and evaluation of priorities for the next five years with some new emerging actions. Of the 212 actions in the current strategy, 94 are currently in progress and a further 24 have been completed, which collectively accounts for 56 per cent of the actions. The strategy update will inform the floodplain management implementation for the remainder of the strategy.

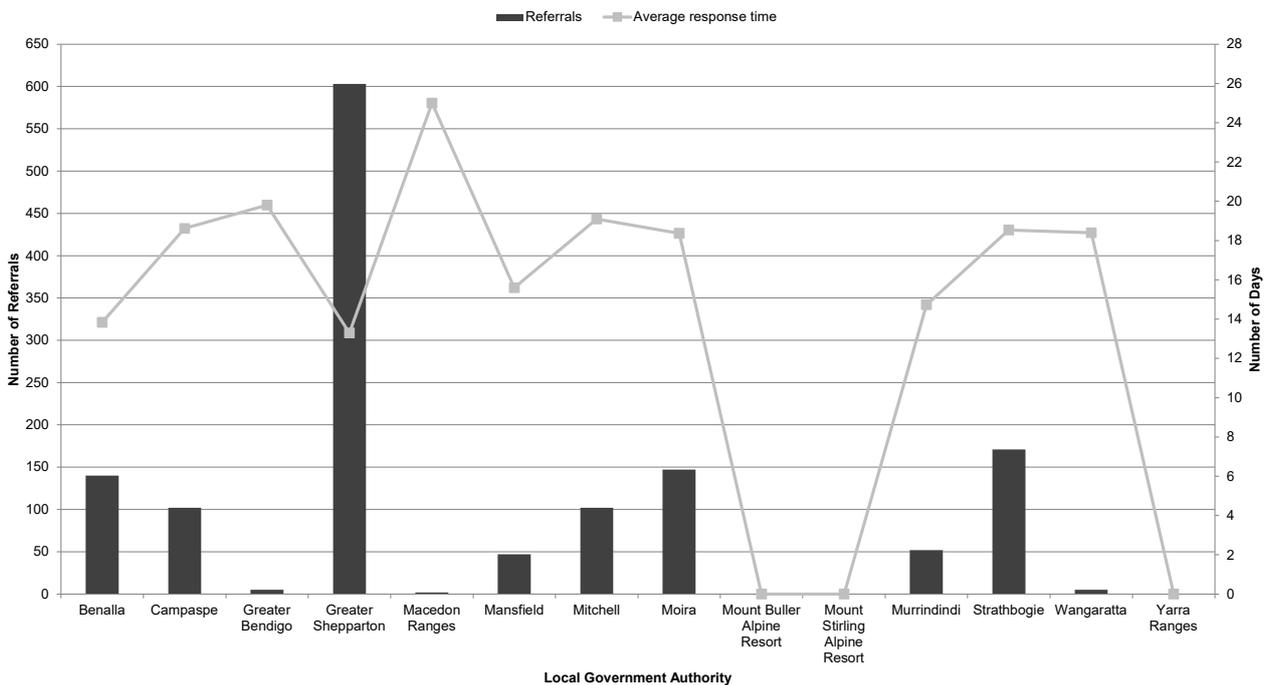
### Statutory Use and Development Planning

A breakdown of the number of floodplain referrals received from each local government area (under a range of Acts) and the average response time is shown in the graph below. Statutory targets under the *Water Act* are shown on page 107. In 2022-23, 95.4 per cent of responses were within the prescribed period with an average response time of 15.6 days.

### Works on waterways permits

Works and activities on a waterway, including its surrounds, require a permit from Goulburn Broken CMA to ensure risks to river health and stability are not compromised.

There have been 70 permits issued for works and activities on waterways within an average response time of 28.7 days.



### What's next?

- Expand the Goulburn Broken Community Flood Intelligence Portal for those most at-risk communities.
- Local government planning scheme amendments to incorporate new mapping and performance-based assessment criteria will continue.
- Work with partners to apply for funding opportunities for new flood studies, work and initiatives within the Goulburn Broken catchment.
- Preparation of a four-year work plan and a monitoring, evaluation, reporting and improvement plan to assist with the implementation of the Goulburn Broken Regional Floodplain Management Strategy.
- Implementation of the Victorian and Regional Floodplain Management Strategies.

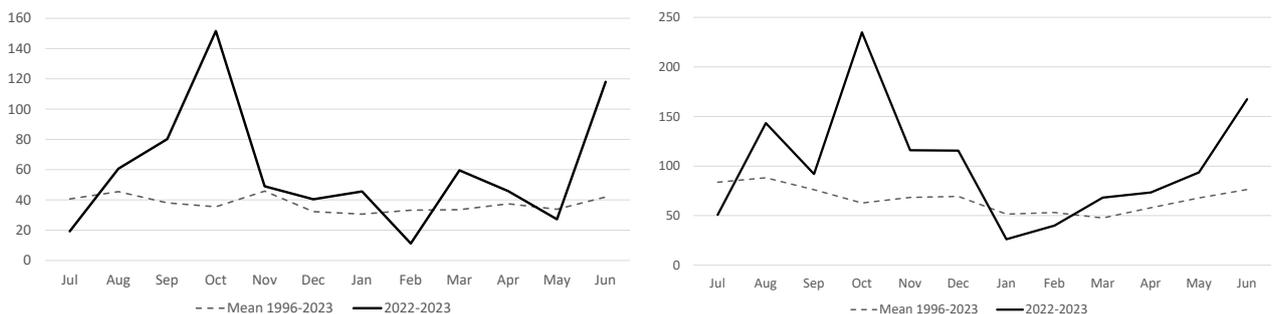
## Works and operations

### Floodplain management actions 2022-23

Action	From funds received		
	Achieved <sup>i</sup>	% of responses	
<b>Integrating knowledge into planning</b>			
Land Use Development Direct Applications (LUD)	no.	459	33.4
Planning Scheme Amendment Direct Application (PSA)	no.	2	0.1
Flood Information Request Direct Applications (FIR)	no.	76	5.5
Other Direct Applications (DAOTH)	no.	17	1.2
Land Use and Development [Formal] (S 55)	no.	354	25.8
Land Use and Development [Advice only] (S 52)	no.	99	7.2
Certification of Subdivision (S 8)	no.	72	5.2
Subdivision and Certification (S 55 & S 8)	no.	1	0.1
Notice of Planning Scheme Amendment (S 19)	no.	8	0.6
Victorian Building Regulations [VBRs] (R 153)	no.	222	16.2
Other LGA Applications (LGAOTH)	no.	58	4.2
Query & Notification of Unauthorised Work	no.	4	0.3
Statement of Compliance (S 8)	no.	0	0.0
Work Plan [Minerals and Energy] (S 77)	no.	0	0.0
Other DEECA Application	no.	2	0.1
Works Approval (WA)	no.	0	0.0
VCAT & PPV	no.	0	0.0
<b>Total</b>		<b>1374</b>	
Victorian Civil Administration Tribunal, Planning Panels Victoria and Victorian Building Appeals Board hearings	days	1.0	
<b>Floodplain implementation</b>			
Gazettal of Flood Amendment	no.	0	
Urban flood studies and management plans	no.	0	
Regional flood studies and management plans	no.	1	
<b>Creating awareness</b>			
Flood education and awareness program	no.	16	

i. Most actions are performed reactively so no targets are set annually, however there are KPIs relating to regulatory waterway/water functions (see page 107).

**Monthly rainfall 2022-23 at Shepparton airport (left) and Eildon (right), mm <sup>i</sup>**



## Investment area - Biodiversity

Compiled by Bek Caldwell, Jim Begley, Janice Mentiplay-Smith, Zara Marais, Karen Brisbane and Kerstie Lee.

### Long-term and annual scorecard<sup>i</sup>

2022-23 performance	Exceeded target		
Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
			<b>VERY HIGH</b>

Native vegetation improvement actions, such as revegetation and stock control, have improved 0.8 per cent (12,808 ha) of the Catchment's private land in the past ten years. After accounting for losses during this time, native vegetation extent has increased by the order of 0.3 per cent (4288 ha), which is not a sufficient scale for all native species to survive.

Current threats, such as clearing (including illegal firewood collection), invasive pest plants and animals, and fire management, are exacerbated by climate change and have a compounding effect on past large-scale habitat loss and degradation. Paddock trees remain vulnerable.

There is an increased need for support to councils regarding native vegetation controls, especially retaining high quality vegetation, in development applications and farm planning.

Good climatic conditions have increased native flowering and seeding events, attracting increased numbers of species such as flying foxes and driven the movement of species such as Superb Parrot, beyond their normal range. These good climatic conditions can also result in higher pest plant numbers having a negative impact on biodiversity.

The floods of 2022 have positively impacted biodiversity (e.g. watering of ecosystems, increased vegetation abundance and attraction of birds) but also had negative impacts (e.g. loss of plantings, fencing, increased weeds in some areas).

The scale of change in areas managed for conservation is not sufficient. Thresholds have been breached and many flora and fauna ecosystems are in decline.

Urbanisation across the Catchment is a continued risk to biodiversity. Anecdotally, there has also been increased usage of areas for recreation which may be impacting biodiversity.

Resilience assessment					Long-term strategic implementation <sup>v</sup>		
Critical attribute affecting long-term catchment health	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>		Start	Stage	
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>		
Native vegetation extent <sup>viii</sup>				<b>VERY HIGH</b>	<b>VERY HIGH</b>	1997	Escalated response <sup>vii</sup>
Native vegetation quality <sup>viii</sup>				<b>VERY HIGH</b>	<b>VERY HIGH</b>	2003	Escalated response <sup>vii</sup>

Certainty of ratings against native vegetation extent is medium (includes assumptions). Certainty of native vegetation quality ratings is low at a catchment scale.

- Appendix 1 describes the analytical framework. Ratings legend is inside front cover.
- Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators on higher level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.
- System is Biodiversity; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- Risk that system will not be in desired state of resilience in long term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- Long-term strategies vary significantly in formality: 'start' approximates when holistic, integrated approach to influencing critical attribute began.
- Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.
- 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.
- These vegetation attributes recognise that threatened species are part of ecological systems.

### Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
2,876	2,838	2,514	2,267

- Budget is based on the Corporate Plan 2023-24.

### Strategic references

Investment in the Catchment's biodiversity is guided by the Biodiversity Strategy for the Goulburn Broken Catchment 2016-2021 (under review) and other regional, Victorian (e.g. Biodiversity 2037) and National policies and strategies (e.g. Natural Heritage Trust) (see Appendix 6).

## Background

Biodiversity is short for biological diversity which is the variety of all the living things and their interactions (e.g. flora, fauna and fungi), and their genetic diversity and ecosystems of which they form part. Biodiversity has direct benefits for people, such as cultural connections to country, ecosystem services (e.g. water purification, productive soils, and pollination) and aesthetically pleasing landscapes, in which to live and enjoy nature.

Biodiversity is integral to the functioning of all social-ecological systems (SESs) and is therefore considered in all aspects of natural resource management. However, to provide focus and clarity for planning and reporting, such as in this Annual Report, Goulburn Broken CMA has separated biodiversity from other biophysical features, such as land and waterways.

Since its inception in 1997, Goulburn Broken CMA has been delivering biodiversity benefits and refining its long-term approach. Biodiversity strategies were evaluated and updated in 2000, 2004, 2010 and 2016, and is currently being reviewed to align with the Regional Catchment Strategy (RCS) and the associated biodiversity theme paper.

## Catchment condition – Biodiversity (since 1990)

### Biodiversity Strategy Vision

*Highly valued, resilient and adaptive ecosystems supporting healthy native biodiversity.*

Many ecosystems, including plant and animal communities and species, are threatened with extinction, which is reflected in their National and State conservation status. The Goulburn Broken CMA aims to achieve resilient ecosystems, with efforts focused on increasing the extent and quality of habitat to create viable and adapting populations of all native species, including threatened species.

#### Long-term objectives are:

##### By 2030:

- **Increase the extent of native vegetation in fragmented landscapes by 70,000 hectares.**
- **Improve the quality of 90 per cent of existing habitat by 10 per cent.**
- **Increase the population viability of 20 flagship species.**

The change in extent of native vegetation (measured with assumptions) is an important indicator of progressing towards the vision, and it is identified as a critical attribute for system function by various scientists (at least 10 per cent extent minimum, preferably > 30 per cent). Progression in the long-term objectives for 'habitat quality' and 'species' population viability' is more difficult to measure. Therefore, extent is currently the major indicator of catchment condition. However, to improve our understanding of progress, we continue to work with scientists to understand changes in vegetation quality and species' viability.

The trend in change of native vegetation extent is significantly below target (see graph page 65). The amount of revegetation possible to increase extent on private land is currently restricted by funding and not by the desire of communities, organisations or individual landholders to revegetate.

Climate change effects, such as the increased frequency and intensity of fire, sporadic and intense rainfall events and flooding, and drought and heat waves, are likely to create losses that are not easily measured. Species are likely to continue to become extinct with little understanding of how to best intervene, or without enough funding to reverse declines. Other factors to consider given likely near-future extinctions in the catchment include: the continued decline in threatened species as the 'extinction debt' from past clearing is realised; competition from pest species; habitat loss through, for example, logs and live trees used for firewood and 'cleaning up'; and the fragmentation effect of clearing vegetation (permitted and illegal), which results in the inability of flora and fauna to move through landscapes, increasing the risk of extinction through subsequent loss of sub-populations.

## Long-term strategy implementation progress and 2022-23 performance

The Biodiversity Strategy's initiatives and actions, which are aligned with Australian and Victorian government strategies and priorities, provide ways to increase biodiversity conservation and progress towards targets. The Goulburn Broken CMA attracts funding, primarily from Australian and Victorian governments, to implement the Biodiversity Strategy, by demonstrating links between project proposals and catchment-scale strategies in biodiversity-focused and multiple-themed projects. While the strategy focuses more on terrestrial biodiversity, waterways and wetlands are also critical parts of biodiversity, and these are described in the Waterways section (page 38).

Long-term strategy implementation progress	2022-23 performance
Biodiversity strategic direction 1: Adapting to change	
<p>Natural resource management policy and socioeconomic drivers are changing rapidly, providing significant threats and opportunities for biodiversity conservation.</p> <p>The Goulburn Broken CMA continues to adapt to changes in a variety of ways by:</p> <ul style="list-style-type: none"> <li>— Responding to and influencing strategies of all CMA programs and other Natural Resource Management agencies.</li> <li>— Adapting a resilience approach to strategic planning and project delivery.</li> <li>— Improving understanding of and responding to, relationships between social and economic factors in biodiversity conservation.</li> </ul>	<p>The Goulburn Broken Biodiversity Strategy 2016-2021 is being implemented. The next iteration is being planned.</p> <p>We continue to adopt resilience thinking, with a focus on responding to climate change. Projects deliver on both Australia's Strategy for Nature 2019-2030 and Protecting Victoria's Environment - Biodiversity Plan 2037.</p> <p>Goulburn Broken CMA continue as a representative on the Victorian CMA Biodiversity Network Meeting and the CMA Biodiversity Managers Forum, to advocate on behalf of CMAs and share learnings and opportunities.</p> <p>Goulburn Broken CMA continue as a representative on the Warby Ovens National Park Advisory Group, as part of its Green List status, on behalf of the Goulburn Broken and North East CMAs.</p> <p>Goulburn Broken CMA continue as a representative on the Victorian Mountain Pygmy Possum State Recovery Team, sharing information on actions to support the Mt Buller population.</p> <p>Goulburn Broken CMA provided several submissions and technical input via meetings and formal responses to strategies and programs such as National Soil Action Plan, the Victorian BushBank program, <i>Flora and Fauna Guarantee Act</i> Threatened Species Action Statements and continue to advocate for enhanced seed services in partnership with the Goulburn Broken Indigenous Seedbank and the Euroa Arboretum (e.g. Right Plant Right Way workshop).</p> <p>Goulburn Broken CMA responded to the October 2022 flood event by supporting community, providing technical input into the Victorian Government Rapid Assessment process and collating environmental site flood impact data with community.</p>
Biodiversity strategic direction 2: Nurturing partnerships	
<p>The Goulburn Broken CMA continue to focus on building and nurturing partnerships with agencies, community networks and groups, Traditional Owners and individuals.</p> <p>Partnerships are growing, which is reflected in the development and delivery of partnership projects.</p>	<p>Goulburn Broken CMA continue to work with a diverse range of partners to provide opportunities for collaboration, cross-promotion of projects, and information-sharing, through symposia, media, and community engagement.</p> <p><b>Key Partners include:</b></p> <p><b><i>Taungurung Land and Waters Council (TLaWC) and Yorta Yorta Nation Aboriginal Corporation (YYNAC):</i></b></p> <p>Goulburn Broken CMA continued to partner with Traditional Owners including co-design for project planning and service delivery on country.</p> <p>Goulburn Broken CMA continued to facilitate the Indigenous Consultation Forums, including with YYNAC and TLaWC. Six Taungurung and two Yorta Yorta Consultation Forums as well as multiple additional meetings were held over the past 12 months. We continue to report on the activities under the Goulburn Broken CMA Reconciliation Action Plan.</p> <p>Goulburn Broken CMA collaborated with both Registered Aboriginal Corporations to carry out onground works on country, through Victorian and Australian government funded projects, including:</p> <ul style="list-style-type: none"> <li>— TLaWC – Mending Mountain Pygmy Possum, Taking Care of Country, Buxton Gum Revival, Swift Parrot Pantry and Linking Landscapes (Grey Box) projects.</li> <li>— YYNAC - Linking Landscapes, Taking Care of Country, Swift Parrot Pantry, and Barmah Country (Ramsar) projects.</li> </ul>

Biodiversity strategic direction 2: Nurturing partnerships (continued)

**Department of Energy, Environment and Climate Action (DEECA):**

Goulburn Broken CMA worked with DEECA through a variety of ways, including implementation of the Taking Care of Country project, native vegetation clearing regulations, planted native vegetation exemptions, ecological thinning requests and other planning processes.

**Parks Victoria:**

Joint project delivery included: Pest plant and animal control in key public land areas as part of the Grey Box project (Linking Landscapes), Taking Care of Country and Barmah Country project. The Linking Landscapes project delivered 500 hectares of weed control on public land managed primarily by Parks Victoria.

**Australian Government:**

Goulburn Broken CMA delivered Australian Government funded projects (Regional Land Partnerships (RLP)) including Grey Box (Linking Landscapes), Barmah Country, Mending Mountains for Pygmy Possum, Buxton Gum Revival, and From the Ground Up. The Environment Restoration Fund Swift Parrot Pantry project was completed in June 2023, as well as the Carbon and Biodiversity (C+B) project.

**Mount Buller Mount Stirling Resort Management:**

Goulburn Broken CMA worked with TLaWC and Resort Management for effective delivery of the project Mending Mountains for Pygmy Possum.

**Local Government:**

Quarterly meetings of the Goulburn Broken Local Government Biodiversity Reference Group continued, building capacity and networking of local government environment officers and others (Department of Transport and Planning, CFA, and DEECA). The Group continued to support one another on a range of biodiversity issues. The Municipal Catchment Coordinator (MCC) role continued to work with Local Government including Moira, Campaspe and Greater Shepparton on a range of initiatives to improve efficiencies in process for natural resource management and the planning scheme. The Goulburn Broken CMA continued to partner with Local Government, CMAs and DEECA through Goulburn Murray Climate Alliance membership and support.

**Goulburn Broken Indigenous Seedbank and Euroa Arboretum:**

Goulburn Broken CMA continued to support the Goulburn Broken Seedbank (managed by Euroa Arboretum since 2019). Euroa Arboretum has the knowledge and enthusiasm (but requires further funding) to progress the Seedbank into the next ten years of sustainable native seed collection and supply, for the delivery of catchment revegetation programs. There is a growing demand for native seed and revegetation due to increasing demand for biodiversity, carbon offset and ecosystem services by a growing number of corporations and landholders. Euroa Arboretum was the key delivery agent for the Buxton Gum Revival Regional Land Partnerships (Australian government) project, which ended in June 2023.

**Moira Community Fund:**

Goulburn Broken CMA continues to be a member of the Moira Shire Environmental Sustainability Committee with other key environmental partners. Moira Shire is a key funder for the Goulburn Broken catchment calendar.

**Community Networks:**

Eight networks (Goulburn Murray Landcare Network, Longwood Plains Conservation Management Network, South West Goulburn Landcare, Gecko CLaN, Regent Honeyeater Project, Up2Us Landcare Alliance, Strathbogie Ranges Conservation Management Network and Upper Goulburn Landcare Network) and multiple community groups were engaged as service delivery partners across land and biodiversity projects, increasing their capacity, delivering incentives to landholders, and community engagement projects.

**Landcare:**

Delivery of the Victorian Government's Landcare Grants 2021-22 provided grant funding to 16 projects and support grant funding to 23 community groups.

Long-term strategy implementation progress	2022-23 performance
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Biodiversity strategic direction 2: Nurturing partnerships (continued)

<p>Investment in biodiversity conservation in the Catchment is increasingly delivered within a resilience framework, which considers a range of factors and drivers of landscape change that we can respond to. Identifying priority landscapes for onground works and promotion of biodiversity conservation will be a focus of local plan development and implementation.</p> <p>This will result in more targeted funding and increased certainty that works are achieving desired outcomes.</p> <p>Continuous improvement and adaptive management underpin the implementation of the Biodiversity Strategy. Synergies are identified between the Biodiversity Strategy, government funding priorities and the formal Expressions of Interest (EOI) process, which identifies project priorities of community and other partners.</p>	<p><b>Landholders:</b> Through several projects, 24 new landowners have ten-year conservation agreements, that cover a total of 199 hectares. Many other landholders are engaged in a variety of ways other than incentives, such as the 'On Your Guard' tree guard project (part of 'Linking Landscapes') which encouraged 249 land managers to protect the 'paddock trees of the future' by installing 800 purpose-built paddock tree guards; and engaging a further 74 through extension (no guards), highlighting the importance of fallen timber and the organic ground layer in the Grey Box Grassy Woodland ecosystem.</p> <p><b>Volunteers:</b> The Goulburn Broken CMA respects and values the NRM community contributions to catchment health. The latest report card (2021-22) identified that the NRM community surveyed (52 per cent) dedicated approximately 27,902 hours to the delivery of projects, activities and events in the Goulburn Broken catchment. More than 40 per cent of time was attributed to delivering onground works and contributing to catchment health.</p> <p><b>New and emerging partnerships:</b> We continue to provide revegetation expertise for biodiversity outcomes for corporate organisations and explore philanthropic and other new partnership opportunities.</p>
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Biodiversity strategic direction 3: Investing more wisely

<p>Investment in biodiversity conservation in the Catchment is increasingly delivered within a resilience framework, which considers a range of factors and drivers of landscape change that we can respond to. Identifying priority landscapes for onground works and promotion of biodiversity conservation will be a focus of local plan development and implementation.</p> <p>This will result in more targeted funding and increased certainty that works are achieving desired outcomes.</p> <p>Continuous improvement and adaptive management underpin the implementation of the Biodiversity Strategy. Synergies are identified between the Biodiversity Strategy, government funding priorities and the formal Expressions of Interest (EOI) process, which identifies project priorities of community and other partners.</p>	<p>Science continues to drive adaptive planning and implementation processes, as we continue to work with researchers and other experts such as:</p> <p><b>Research Agencies:</b> Adapting actions based on the best science continues through partnerships with a range of universities and research institutions, such as; La Trobe University, University of Melbourne, Australian National University, Monash University, Charles Sturt University, Sustainable Farms, Cesar Australia, Terrestrial Ecosystem Research Network (TERN) and CSIRO. For example, a partnership with Melbourne University resulted in 40 'State and Transition' flora monitoring sites being established and monitored periodically, to track change in protected and revegetated Grey Box Grassy Woodland sites.</p> <p><b>Mending Mountains for Pygmy Possum Project:</b> Cat trapping continued to reduce the impact of these predators on the possum population. Possum monitoring has been undertaken by Dean Heinze (wildlife ecologist) at isolated sub-populations to contribute to the management plan, that will inform any future translocations. Spring surveys indicated good numbers of possum recruitment despite recorded litter losses in previous season. Revegetation has been completed of 2,500 food resource plants in key Pygmy Possum habitat areas by Biik Cultural Land Management.</p> <p><b>Bogong moth surveys:</b> The Mending Mountains for the Pygmy Possum project helped to determine future management options to ensure adequate food resources for this threatened species and we continue to be involved in collaborative discussions around future scenarios of Bogong moth populations.</p> <p><b>Carbon and Biodiversity Project:</b> Goulburn Broken CMA delivered the second round of this Australian Government funded pilot program, including landholder extension. In total we were able to assist 41 landholders with information about the project, highlighting where to find information and support with biodiversity mapping and information. Four property visits were completed. We continued to attend national meetings with other pilot Natural Resource Management delivery bodies to share learnings.</p>
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Long-term strategy implementation progress	2022-23 performance
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Biodiversity strategic direction 4: Building on our ecological infrastructure

Significant effort continues to build biodiversity understanding and awareness across the Catchment. While more landholders may be viewing biodiversity conservation as a legitimate land use and integral part of land management financial, technical, and other support for them to actively manage biodiversity needs to be available with support from both investors and the broader community.

The importance of the links between biodiversity conservation and agricultural productivity has been promoted through providing opportunities for landholders to act as stewards of the land.

Ongoing efforts are required to promote synergies between biodiversity conservation and land management at the farm and landscapes scales.

Conservation Management Networks continue to play a valuable role in promoting the importance of biodiversity conservation across land tenures.

Mixed and unclear messages from a range of sources, such as ongoing changes to native vegetation clearing regulations, pose challenges in strengthening community support for biodiversity conservation.

**Environmental and Cultural Heritage Management Crews:**  
Woka Walla and Biik Cultural Land Management crews were engaged throughout the year to heal Country. This included delivery of environmental and cultural heritage management on country, such as flora and fauna assessments, pest plant and animal management, fencing, and revegetation to increase extent and diversity of habitat. The crews also carried out cultural burns on public and private land, in partnership with Goulburn Broken CMA, CFA, Parks Victoria and DEECA.

**Building biodiversity connectivity & ongoing protection efforts:**  
Revegetation and remnant enhancement activities continue to be delivered strategically, in priority landscapes for critical landscape elements e.g. waterways as corridors and drought refugia, and increasing stepping stones through protecting emerging paddock trees.

Ongoing loss of native vegetation occurs from a range of factors such as clearing of paddock trees and remnant vegetation (permitted, and exemptions), and unmeasured losses due to tree dieback, illegal clearing, firewood collection, ploughing of native/derived grasslands for cropping and fire (planned and wildfire). The Goulburn Broken CMA continues to work with partners, particularly Local Government (responsible authority) and DEECA (referral authority) to improve policy implementation and communication. To continue as is will result in the ongoing loss of native vegetation on private land.

**Australian Government funded projects:**

**Linking Landscapes and Communities:**  
In 2022-23, the Conserving Grey Box Grassy Woodlands and Derived Native Grasslands (Linking Landscapes) project delivered 2,210 hectares of pest plant and animal control, 755 hectares of revegetation, and permanently protected 75.6 hectares through conservation covenants. Throughout the five years of the project, 54 ten-year management agreements with private landholders were delivered, for improved stewardship over 1166 hectares of private land.

**Mending Mountains for Pygmy Possum:**  
This project increased and improved the critical Mountain Pygmy Possum habitat areas at Mount Buller through six hectares of revegetation (with a focus on food resource plants), 1000 hectares of cat control, and 16 hectares of weed control. Project outputs align with recovery plan objectives at Victorian and Australian government levels.

**Buxton Gum Revival:**  
This project delivered five hectares of onground works increasing the population of *Eucalyptus crenulata* (Buxton Gum) in the Acheron Valley. This project improved the long-term resilience of this endangered species. Engagement with landholders through survey and revegetation works raised the profile of the species and encouraged protection of remnant Buxton Gum populations. Delivery of these actions was in consultation with Euroa Arboretum and TLaWC. Critical to the success of this project was the availability of seed and plants.

**Barmah Country:**  
The project delivered 400 hectares of weed control, two fox baiting events across 30,000 hectares, and two pig/feral animal control events removing 68 fallow deer and 52 feral pigs, across 10,000 hectares of Barmah National Park (Australian Government funded). The Floodplain Ecology Course was implemented successfully.

**Swift Parrot Pantry:**  
The project funding implemented 77 hectares of revegetation (16 hectares at Reedy Lake – Parks Victoria site and 61 hectares in northern Victoria on private land). Seven hectares of the private land site is a Seed Production Area for *Acacia salicina*, established in partnership with the Goulburn Broken Indigenous Seedbank. TLaWC and YNAC were engaged to work on country via this project.

Long-term strategy implementation progress	2022-23 performance
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Biodiversity strategic direction 4: Building on our ecological infrastructure (continued)

	<p><b>Victorian Government funded projects:</b></p> <p><b><i>Our Catchment Our Communities (Taking Care of Country):</i></b>                  In 2022-23 this project delivered 107 hectares of improved stewardship of land, through six landholders' 10-year management conservation agreements.</p> <p><b>Victorian Landcare Grants:</b>                  This project (2022) provided 16 grant funding projects and 23 support funding projects in areas of community education, pest plant and animal control, threatened species and farm management, providing critical funding for the community. A new Victorian Landcare Grant expression of interest process for 2023 grants was undertaken and submitted to DEECA in June 2023.</p> <p><b>Other funding:</b>                  Through working with Kilter Rural, 18 hectares of revegetation and 32 hectares of repeated direct seeding (due to flooding) was implemented in a priority landscape of the Agricultural Floodplains SES.</p> <p>The Goulburn Broken Indigenous Seedbank provided: sales to nurseries = 47 kg, sales for direct seeding = 69 kg and seed collection = 175 kgs.</p>
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Biodiversity strategic direction 5: Legitimising biodiversity conservation

<p>Significant effort continues to build biodiversity understanding and awareness across the Catchment. The importance of the links between biodiversity conservation and agricultural productivity has been promoted through providing opportunities for landholders to act as stewards of the land.</p>	<p>Goulburn Broken CMA used a variety of communication methods to promote projects and raise awareness of biodiversity, including field days, signage, media and flyers, one-on-one discussions, and virtual meetings and webinars with service delivery partners and community.</p> <p>The 'Catchment Critters' wildlife awareness campaign featured a monthly media release and photo of a native animal living in the Goulburn Broken catchment.</p> <p>The 'Year of the Frog' campaign began in January 2022 through to December 2022, showcasing Grey Box Grassy Woodland species. A 'Frog of the Month' was highlighted and associated local ABC radio interviews, social and print media produced, including 56 media articles/promotional articles/radio interviews, four workshops/field days with 160 attendees, collaboration with six stakeholders and the production of six QR coded frog posters produced that play the audio file of the frog call when scanned.</p> <p>Traditional, web and social media: newspaper articles included stories about all projects such as 'On Your Guard' project, 'Catchment Critters', protection of biodiversity, the 'Year of the Frog', the Swift Parrot Pantry project, Taking Care of Country, Buxton Gum, 23 social media articles about wildlife of the Grey Box Grassy Woodlands (Linking Landscapes) and four about the Mending Mountains for Pygmy Possum project.</p> <p>Booklets and flyers: 'The Mammal booklet' was produced and distributed to partners and community to inform landholders and the community about the catchment's 30 native mammal species.</p> <p>Four thousand copies of the Goulburn Broken catchment calendar were distributed across the Catchment and continued to be extremely popular.</p> <p>Eleven presentations and field days were held, such as a Swift Parrot event with Birdlife Australia, Linking Landscapes events and two school presentations delivered by TLaWC about the Mending Mountains for Pygmy Possum project.</p>
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**Community capacity, engagement and involvement**

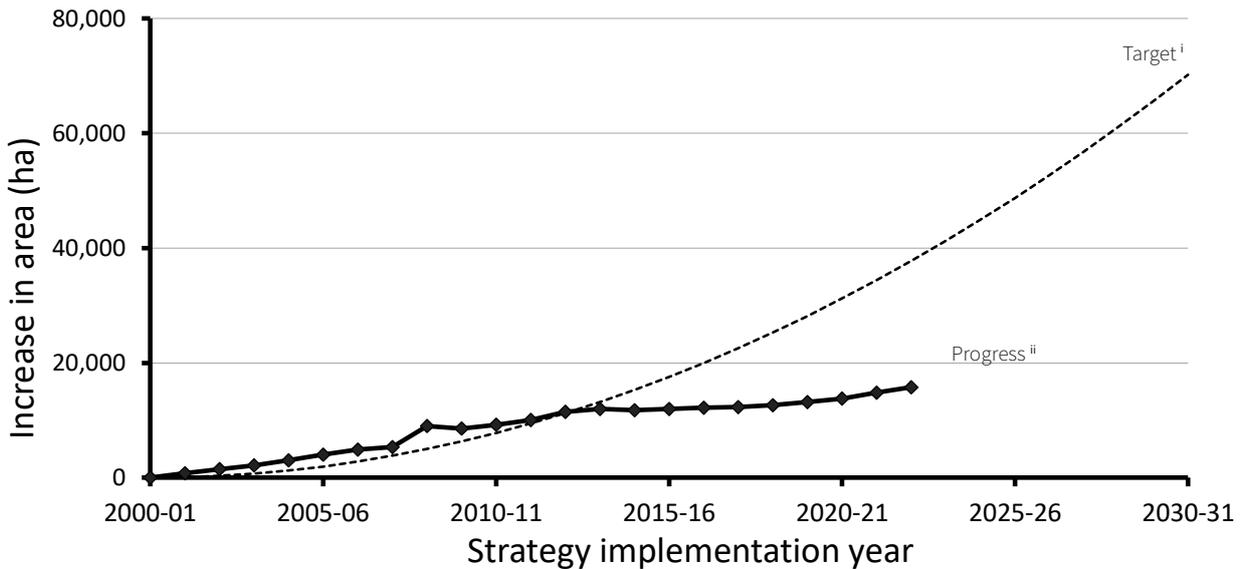
Long-term strategy implementation and 2022-23 performance related to the community are included throughout the previous table.

**Biodiversity onground Actions 2020-21, 2021-22 and 2022-23**

Action		From funds received				% achieved
		Achieved <sup>i</sup>		Target		
		2020-21	2021-22	2022-23		
<b>Stock grazing management action</b>						
Fence terrestrial remnant vegetation	ha	365	157	117	41	286
Fence wetland remnant	ha	-	4	-	-	
Fence stream/river remnant <sup>ii</sup>	ha	153	90	42	-	
Binding management agreement (licence, Section 173, covenant) <sup>iii</sup>	ha	11	67	76	-	
Grazing regime change	ha	-	-	-	-	
<b>Habitat loss management</b>						
Revegetation – plant natives	ha	607	374	526	235	224

- i. Achievements include those from complementary investment areas (Land, Community and Water). For a full list of footnotes please see Appendix 4.
- ii. Area figure supplied by River and Wetland Health.
- iii. These are shown as 'Binding management agreements' in the detailed outputs in Appendix 4. This target will only be reported once a covenant is on title, which may take more than 12 months.

**Progress towards native vegetation extent target <sup>i</sup>, increase in area, hectares**

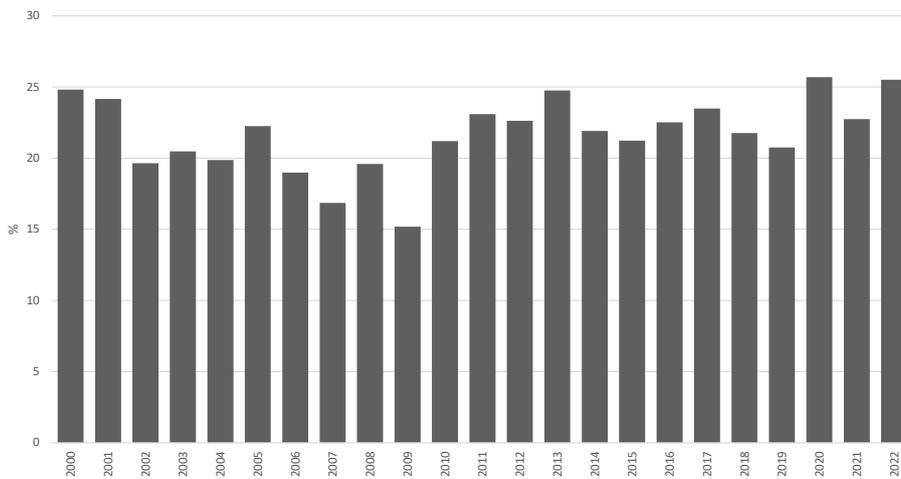


- i. Resource condition target (revised 2009): Increase the extent of native vegetation in fragmented landscapes by 70,000 hectares by 2030 to restore threatened Ecological Vegetation Classes (EVC) and to improve landscape connectivity. Note that native vegetation extent is just one indicator of biodiversity. Other indicators such as native vegetation quality are more difficult to measure.
- ii. Based on assumptions of gains in vegetation (such as revegetation and natural regeneration) and losses of vegetation (such as illegal clearing). Vegetation burnt by major fires in natural areas is not included as a loss of extent, as it is assumed the area burnt will regenerate by 2030. However, direct vegetation removal associated with fires, such as removal of 'high risk' trees on roadsides and private land or death of scattered paddock trees from fire, is assumed as a loss in the net outcome in the year of the fire and includes an ongoing loss due to fire suppression activities.

### What's next?

- Continue to work with Traditional Owners to support healing of country.
- Traditional Owner led burning programs continue to be a focus across the Catchment on private and public land.
- Climate change continues to be a focus, including matching seed sourcing for native flora to increase the potential for species survival in a warming climate, and building seed production areas of climate-matched species provenances.
- Biodiversity (and carbon) credit related initiatives, that assist landholders in protecting biodiversity on farms.
- We will continue to integrate climate change adaptation into strategies, planning and project design.
- Deliver projects that align with aspirations and objectives of TLaWC and YYNAC Country Plans.
- Contribute to implementation of the RCS and review of the Biodiversity Strategy.
- Continue to promote systems-based approaches for land management to achieve whole-of-farm and catchment outcomes for both biodiversity and agricultural productivity.
- Deliver a range of Victorian and Australian Government funded projects and advocacy for further funding to support implementation of the RCS, Biodiversity 2037 and the Goulburn Broken Catchment Biodiversity Strategy.
- Continue to work with a range of partners to deliver value-add to landscape scale projects.
- Continue to advocate for robust vegetation clearing regulations to achieve no net loss.
- Enhancing (access) to scientific modelling to improve certainty of native vegetation extent and quality ratings.

**Goulburn Broken catchment percentage tree cover change<sup>i</sup>**



i. Annual average woody vegetation cover fraction, derived from Landsat imager by ANU  
 Source: Centre for Water and Landscape Dynamics, Australian National University. [www.ausenv.online](http://www.ausenv.online)

## Investment area - Land

Compiled by Rhiannon Sandford, Kerstie Lee, Karen Brisbane-Bullock, Bek Caldwell, and Jaye Caldwell (AgVic).

### Long-term and annual scorecard <sup>i</sup>

2022-23 performance	Exceeded target		
Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
	●	●	MEDIUM

Good seasonal rainfall continued to drive confidence in many agricultural sectors (despite many being impacted by floods). The outcome is likely to include increased crop and pasture growth (with some local variability), resulting in good ground cover and more organic matter turn over, and strategic investments in soil health, such as lime.

Good seasonal rainfall also drove increased requirement for crop residue management, leading to industry investment in determining options that are better than burning (multiple outcomes).

Increased awareness of how soils can be improved is being applied on many farms. However, the changing demographics in the south of the catchment is affecting and changing the use of private land.

Visitor numbers and recreational use of public land is increasing and management issues such as rubbish, access and illegal firewood collection are increasing, along with efforts to control feral grazing species.

Although the 2022 floods increased invasive plant extent, Catchment-wide invasive plant and animal management is now predominately focused on new and emerging species and complementing community activity. Under present arrangements, there are high and increasing long-term risks in hot-spot areas like deer and key weed species in priority areas.

Changes in land use continue to impact biodiversity, including Peri-urban development, and corporate farming.

There is increased complexity in managing carbon and biodiversity on farm with demand for corporate green credentials increasing and unclear pathways for nature accounting; and increasing recognition of the nexus between ecosystem services and production, leading to more interest in supporting NRM on farms.

Resilience assessment						Long-term strategic implementation <sup>v</sup>	
Critical attribute affecting long-term catchment health	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>			Start	Stage
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>		
Soils for agriculture	●	●	—	MEDIUM	HIGH	2006	Middle
Purpose and use of private land	●	●	—	MEDIUM	HIGH	2006	Watch & adapt
Purpose and use of public land	●	●	▲	MEDIUM	HIGH	2006	Watch & adapt
Invasive plants and animals	●	●	▲	HIGH	VERY HIGH	2001	Middle

Certainty around soils for agriculture is moderate to low with rigorous assessments of soil health, and related land use, limited. Certainty around the purpose and use of private land is moderate to low with limited data and changing land use. Certainty around purpose and use of public land is low as condition can change annually. There is high confidence in invasive plant and animal ratings supported by a good understanding of the current regional drivers obtained through the many community engagement and partnership forums that exist.

- i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.
- ii. Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators of higher level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.
- iii. System is Land; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- iv. Risk that system will not be in desired state of resilience in long term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- v. Long-term strategies vary significantly in formality: 'start' approximates when holistic, integrated approach to influencing critical attribute began.
- vi. Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.

### Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
622	501	420	336

- i. Budget is based on the Corporate Plan 2023-24.

## Strategic references

The Goulburn Broken Land Health Strategy 2017-2020 (under review) guides investment of public funds in improving the Catchment's land resources. The Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy 2019-2025 sets the high-level direction for this investment in the Catchment and supports the Victorian Invasive Plants and Animals Policy Framework. Priorities for pest management are also guided by community initiative and support. The Murray-Darling Basin Authority and Victorian Government's land, salinity and agricultural strategies are also pertinent references for land management. Appendix 6 includes a more complete list.

## Background

Land is a fundamental part of the natural environment supporting ecosystems, livelihoods and lifestyles of the community. It is used for many and varied purposes making it difficult to define a rating condition to encompass all uses; good condition for one use may be poor for another. In terms of Natural Resource Management, the Goulburn Broken Regional Catchment Strategy defines good condition as healthy functioning land systems that provide ecosystem services and deliver on a range of cultural, lifestyle and economic outcomes. In assessing the natural resources that underpin healthy land and support its function, we have devised indicators that work for many purposes. These are: species diversity, ground cover, soil organic carbon and soil acidity.

Seventy per cent of the Goulburn Broken catchment is privately owned (1.68 million hectares), with about 63 per cent managed primarily for agricultural production and the remaining seven per cent a mix of rural residential and urban development. Approximately 30 per cent (800,000 hectares) is public land that is primarily reserved for environmental and cultural conservation, nature-based tourism and timber harvesting. Public land is co-managed by Traditional Owners and government agencies.

The diversity of private enterprises continues to grow in areas such as solar farms, glasshouse horticultural production and tourism. At the same time, traditional agricultural businesses such as cattle and sheep grazing, horticulture, broadacre crops, hay production and dairy production remain dominant.

The Australian Government invests in the Goulburn Broken catchment's 'land' via the Regional Land Partnerships 'From the Ground Up' project, the Regional Agriculture Landcare Facilitator project and the C (Carbon) + B (Biodiversity) Pilot. The Victorian Government invests in 'land' through programs such as Landcare and Good Neighbour, Local Government Roadside Weeds, the Shepparton Irrigation Region Land and Water Management Plan, and the Goulburn Broken CMA Waterways program. Weed information collected as part of the invasive pest plant and animal reporting includes Agriculture Victoria programs and Goulburn Broken CMA environmental based programs. As per previous years, there is no dedicated funding for many aspects of land, such as soil conservation works or treatment of soil acidity, however Goulburn Broken CMA influences land outcomes through investment in project activities such as grazing training to manage ground cover, revegetation for biodiversity with complementary erosion gully protection, whole farm planning, soil carbon and soil fertility training and through

roles such as being a referral authority for floodplain management, and participation in multi-stakeholder forums.

## Catchment condition (since 1990)

### Agricultural land

Since 1990, farmers are increasingly aware of the importance of groundcover, soil carbon, soil structure, and monitoring soil acidity and salinity. More recently, climate change, industry carbon targets and carbon farming are driving increasing interest from all landholders about how they manage and utilise ecosystem services such as carbon cycling and sequestration, shade and shelter, to adapt to climate change and meet emissions targets. Even more recent is growing interest in natural capital and biodiversity stewardship and the importance of habitat for pollinators and predators.

Working with partners, Goulburn Broken CMA helps landholders meet long-term goals for soil health including capacity to store carbon, hold water, and be productive. These long-term goals for soils are addressed by increasing soil organic matter, addressing soil acidity, fertility, erosion and salinity.

Ground cover and soil organic carbon are key to making the most use of rain when it falls and therefore healthier, more resilient soils for sustainable management of the catchment. Ground cover is also critical in preventing soil erosion, however the amount of ground cover needed varies considerably with topography, soil type, rainfall and land use. Seasonal conditions have a significant impact on achievable ground cover. Good grazing and crop management are required to maintain ground cover.

Chronic soil problems, such as compaction, acidification, wind erosion and soil carbon loss, are not immediately obvious, prompting the need for soil assessment and education around maintenance of healthy soils to determine solutions that fit many different soils and climates, and landholder objectives. Further information on soil carbon and acidity levels and ground cover is presented in the following sections.

Saline discharge sites remain present and active, which was evident with a wet year (including record level floods).

Water policy reform and reduced water availability over the last decade is forcing fundamental changes in the Shepparton Irrigation Region (see Sustainable irrigation section page 75). Elevated land values continue to drive farm subdivision and land turnover. Well-managed productive land is important for food security, the economy and meaningful employment.

### Public land

Although environmental resilience has improved because of increased reservation status of public land, significant challenges remain or have emerged, like fire, climate change, invasive plants and animals and increased recreation pressure. Some pockets of tension between personal and broader community purposes, such as those related to logging, deer or horses, require significant whole-of-stakeholder commitment to resolve.

Floods in October 2022, although valuable in some areas (particularly wetlands with well-established native vegetation) also caused significant erosion in many other public land areas along waterways and riparian land. Impacts

such as erosion of the bed and banks of waterways, damage or loss of waterway assets (such as riparian fencing and erosion control structures), resulting in negative impacts on water quality, habitat and native plants and animals, and subsequent spread of pest plants and animals. Bank erosion is a common problem in high rainfall and flood events on waterways that are not well vegetated or have old and collapsing willows. Goulburn Broken CMA and partners continue to implement activities to vegetate banks and replace willows with indigenous plantings.

More information on the condition of public land can be found in the Biodiversity (page 58) and Waterways (page 38) sections.

### Invasive plants and animals

In the Goulburn Broken catchment, invasive plant and animal management is built into projects and programs where possible. The 'biosecurity approach' of the Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy 2019-2025 emphasises the prevention and eradication of high-risk new or emerging weed species and correlates to the Victorian Government approach. This approach is considered the most cost-effective use of limited resources.

Where groups demonstrate sustained, coordinated effort over several years to control State priority invasive plants and animals, Agriculture Victoria (AgVic) endeavours to provide support through targeted compliance programs.

Many species of invasive plants and animals have become naturalised and invade areas of the Catchment.

Foxes, wild dogs and feral cats kill millions of native animals each year. Rabbits cause erosion and, together with deer and pigs, compete for resources and prevent natural regeneration of native flora. Deer impact on alpine bogs, wetlands, and riparian zones as well as impacting revegetation sites. An adult Sambar Deer is rated as 2.5 Dry Sheep Equivalent, pressuring many agricultural industries and enterprises.

Pest plants outcompete native species, reducing diversity, and can provide harbour for pest animals.

#### Key community groups and partners of From the Ground Up:

**Landcare Networks:** Up2Us, South West Goulburn, Upper Goulburn, Goulburn Murray, Hughes Creek, Gecko CLaN.

**Conservation Management Networks:** Strathbogie Ranges, Longwood Plains, Whroo Goldfields, Broken Boosey.

**Industry and producer groups:** Irrigated Farmers Network, Maize Association Australia, Riverine Plains Inc., Vic No-Till Farmers Association.

**Landcare and community groups:** Euroa Arboretum Inc., Strathbogie Tableland Landcare Group, Greta Valley Landcare Group, Yea River Catchment Landcare Group, Yellow Creek Dairy Creek Landcare Group, Burnt Creek Landcare Group, Goomalibee Landcare Group, Swanpool Landcare Group.

**Universities:** University of Melbourne.

**Funder:** Australian Government.

### Long-term strategy implementation progress and 2022-23 performance

Goulburn Broken CMA continues to work closely with AgVic, Landcare networks and groups, and industry groups for strategic implementation of Land outcomes.

### Community capacity, engagement and involvement

See also Community section (page 33).

Goulburn Broken CMA's Sustainable Landscapes Program supports the delivery of actions through Victorian and Australian government funding streams. This recognises that to be resilient, systems within and beyond the farm fence require a focus on connections between all elements. Team members work closely with relevant agencies such as Parks Victoria, DEECA, AgVic, local government, water authorities, Traditional Owners, community and industry groups, and individuals.

Where appropriate, Goulburn Broken CMA and partners encourage farmers to provide broader community benefits by using areas of native vegetation, waterways, wetlands and rocky outcrops for more passive purposes. These aspects of land are reported in the Biodiversity and Waterways sections. Goulburn Broken CMA also works with industry and Landcare networks to support innovation in farming methods that increase sustainability such as regenerative grazing, integrated pest and disease management, precision soil testing and soil moisture monitoring, and soil fertility.

Community engagement is critical to successful delivery. Extension and education events are developed and implemented, often through delivery by community networks, to increase awareness of the importance of creating healthy landscapes, healthy soil, conserving biodiversity and adapting to climate change.

Known funding to community groups included the Victorian Government's Landcare grants (via Goulburn Broken CMA), Future Drought Fund adoption and extension, and as partners in Goulburn Broken CMA's From the Ground Up project, funded through the Australian Government's National Landcare Program.

During 2022-23, Goulburn Broken CMA's Australian Government-funded project 'From the Ground Up' delivered activities via 19 sub-projects worth \$420,000 through Goulburn Broken CMA and project partners (see Key partners box below). Activities included 20 demonstration sites, 27 workshops, 11 field days and 54 communication materials. 782 participants (of which 446 were farmers) managing 118,804 hectares, participated in program activities.

During 2022-23, the Victorian Landcare Grants supported community-led pest plant projects worth \$53,330 across 2,209 hectares to combat the impact of blackberries and gorse on local environments and farms.

## Soils for agriculture

Long-term objectives – between 2017 and 2023:

- Soil pH at or above 4.8–5.0 (CaCl<sub>2</sub>), or with aluminium levels below 5 per cent, on agricultural land.
- Soil organic carbon equal to or above 2 per cent, and where possible, increasing.
- Maintain greater than 70 per cent ground cover 100 per cent of the time on agricultural land.

### Soil pH

In 2022-23, 241 soil samples were collected and tested for pH as part of the From the Ground Up project. Across the catchment the median soil pH was 4.9 (CaCl<sub>2</sub>) with sub-regional variation across the catchment in the range pH 4.1–7.1 (CaCl<sub>2</sub>). The median pH level has increased from 4.8 (CaCl<sub>2</sub>) in 2019, which was set as the baseline target for the From the Ground Up project. The baseline was developed from 1,398 samples collected between 2011-2017. Tested pH in 2022-23 demonstrates progress towards the objective, which was set as above 4.8 (but not necessarily higher), as 4.8 in calcium chloride is where we start to see issues with aluminium. We did find that 20–40 per cent of samples in the Productive Plains, Upland Slopes and Commuting Hills SESs had soluble aluminium levels of 5 per cent or above, representing a risk to plant productivity. These results are consistent with the acidic nature of our higher rainfall soils. However, the trend in 2022-23 is less pronounced than in 2018-19. Whether this is a consequence of extension activities and changed practices we cannot determine from this data. However, there was a very positive shift in knowledge, awareness and skill to manage soil acidity reported because of attending extension activities like those in the From the Ground Up project. Furthermore, statistical analysis was not used in guiding sample site selection, with farmer participation voluntary and site selection based on their priorities. The sample size was limited and clustered in geographic areas, so inferences from the small dataset are limited but they do provide a current snapshot of soil acidity.

## Soil organic carbon

269 samples were collected and tested for soil organic carbon (SOC) through the From the Ground Up project in 2022-23. We found a median SOC level of 3.22 per cent across the catchment, exceeding the baseline of 2.7 per cent set in 2019 through the From the Ground Up project. The range of SOC levels was 0.8–6.11 per cent, with lowest levels found in the lower rainfall intensive agricultural use zones of the Agricultural Floodplains and Productive Plains SESs, which correlates with rainfall and land use. Again, median SOC 3.22 per cent also achieves the long-term SOC objective above, however the same data limitations apply to SOC as to pH.

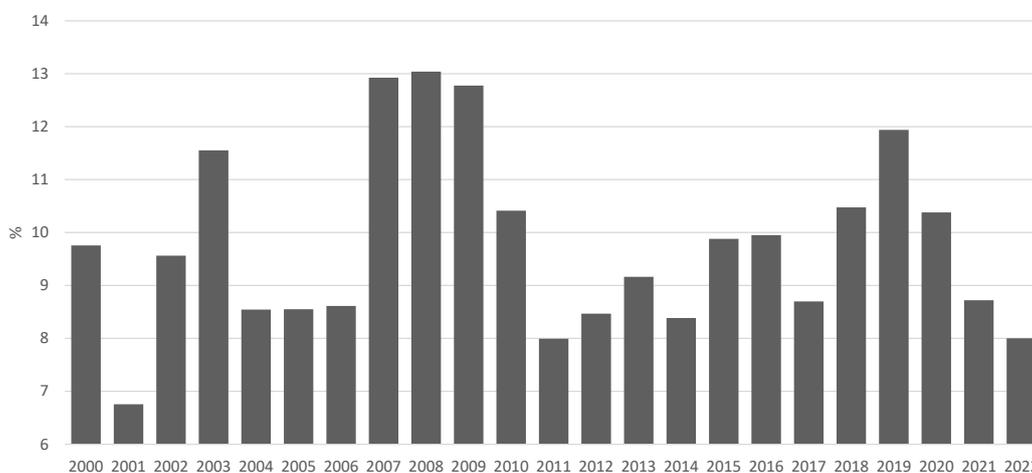
### Ground cover

Agricultural land is defined as cropping and grazing land and covers 66 per cent of the Catchment. When ground cover is above 70 per cent, it is deemed to be protected from both wind and water erosion. Wind and water erosion risk are mapped over broad geographic areas using ground cover data obtained from RAPP Map.

April is generally the point of lowest ground cover, so this is the point at which we assess satellite cover. In April 2023, 93.1 per cent of agricultural land was likely to be protected from erosion with greater than 70 per cent cover. The flip side, 6.9 per cent of this area (108,772 hectares) was vulnerable to water erosion. This is a slight increase, by 1.1 per cent, in potential exposed land from April 2022. Since April 2020 we have seen similar soil protection levels of around 90–94 per cent; these results reflect good growing season rainfall across the past four years. That said, currently we have not met our long-term outcome of 100 per cent of agricultural land with at least 70 per cent cover. This outcome is going to be harder to meet under changed climate and with the prediction of more frequent droughts and intense summer rainfall events.

It should be noted that fractional ground cover changes over small areas are not likely to be picked up, and that under dense tree canopy, ground cover cannot reliably be discerned from overhead canopy cover. So, for agricultural land only land with less than 20 per cent canopy cover is used to determine ground cover.

**Goulburn Broken catchment  
Percentage of exposed soil<sup>i</sup>**



i. Annual mean percentage of soil unprotected by living vegetation or litter, derived from MODIS imagery and CSIRO mapping by the OzWALD model-data fusion system. Source: Centre for Water and Landscape Dynamics, Australian National University. [www.ausenv.online](http://www.ausenv.online).

## Invasive plants and animals

Different pest plants and animals are targeted through various fund sources, including Landcare and Good Neighbour programs, Local Government Roadside Weeds, Australian Government's Regional Land Partnerships projects and Goulburn Broken CMA River Health programs. Community groups use local connections to encourage high levels of landholder participation in coordinated pest control programs where neighbours work together. All programs foster community support and ensure the best outcomes from the small investment available.

Goulburn Broken CMA participates in the North-East Deer Round Table forum. Goulburn Broken CMA also assists DEECA with linkages to local landholders in the Holland/Ryans Creek catchment and the Warby Ranges to undertake feral pig control.

In consultation with community groups, targeted compliance and extension activities were delivered to support large-scale rabbit and weed control programs, ensuring participation of all land managers in project areas.

Community groups are leading coordination of local weed programs. For example, in Mansfield, Up2Us Landcare Alliance coordinates state and local agencies to collaboratively hold an annual weed forum. On the northern side of the Strathbogie Ranges, the six Landcare Groups within the Granite Creeks Project are working with Strathbogie Shire Council to control a variety of community priority weeds on roadsides and adjoining land.

Wild dogs continue to provide localised management challenges for several landholders that operate at the interface with public land. Community project and information sessions provide up to date best practice control and exclusion fencing options.

Investment in community-driven blackberry control works continued, in parallel with AgVic and existing Blackberry Action Groups, with some great works and engagement occurring in the Sunday Creek catchment area.

Management of all known sites of State Prohibited Weeds and Regionally Prohibited Weeds remained a high priority and control activity was delivered by AgVic.

The Goulburn Broken CMA River Health Program and Goulburn-Murray Water (GMW) continue to monitor and implement control activities in at-risk waterways for aquatic weeds e.g. Cabomba at Lake Benalla and Arrowhead in lower Broken Creek.

As a consistent investor in pest plants and animals, the Victorian Landcare grants provide funding for Landcare and the environmental community to undertake pest plant management which also contributed to significant pest plant control across the catchment. The Australian Government funded Linking Landscapes (Grey Box) project continued to support (through funding and coordination) pest plant and animal control on both private and public land across the targeted project area. This included 4,448 hectares of pest plant and 2,876 hectares of pest animal control on public and private land over the last five years.

AgVic Invasive Plants and Animals activities in 2022-23 were impacted across the state by staff deployments to biosecurity and emergency response events including Varroa mite and the October floods.

Key highlights of operational works undertaken on Invasive Plant and Animal projects by Agriculture Victoria staff include:

- Regionally Prohibited Weeds (seven compliance projects): targeting Serrated tussock, Artichoke thistle, One-leaf and Two-leaf Cape tulip and ragwort; 195 properties and public land sites inspected; 14,112 hectares inspected; 13 Directions Notices issued. One landowner was issued with an official warning letter for failing to comply with a Directions Notice to control ragwort.
- Granite Creek area rabbit compliance project: 64 private properties and public land areas targeted; 4411 hectares inspected; nine Direction Notices issued; Control works were conducted by landowners on several other properties, prior to initial compliance inspections.
- Sunday Creek – Waterford Park area Blackberry compliance project: following on from a previous extension and compliance projects, three properties covering approximately 770 hectares inspected to assess ongoing works by the landowner.

State Prohibited Weed sites were monitored and treated where required: three Water hyacinth sites monitored; four Camel thorn sites monitored and treated; one Giant Knotweed site monitored. Two new (suspected) Salvinia sites were discovered as a result of investigations into the online trade of aquatic plants. The plants were removed and sent away to be DNA tested to confirm their identity.

## Regional Agriculture Landcare Facilitator and Landcare

The Regional Agriculture Landcare Facilitator (renamed Sustainable Agriculture Facilitator as of 1 July 2023) sits within the Land and Biodiversity team of the Sustainable Landscapes Program. Funded by the Australian Government's National Landcare Program, the facilitator works to support farmers and land managers in the Goulburn Broken catchment to increase their awareness, knowledge and skills in sustainable farm management practices. The facilitator also supports regional community leaders and groups engaged in Natural Resource Management and agricultural productivity to increase their capacity, confidence and participation.

The project focuses on private land used for agriculture supporting the delivery of the 'From the Ground Up' project via workshops, short courses, field days, and publications in partnership with community, industry groups and government.

In collaboration with each of the networks and the Regional Landcare Coordinator, the facilitator creates opportunities for leadership development within the community, aligning with the Regional Catchment Strategy outcomes and improving the support and strength of our community partnerships.

The continuing development of our community network facilitators and coordinators provides the mechanisms to deliver to our communities what they deem important in the agricultural and biodiversity space. One such mechanism which continues to work well is the peer training program offered across four of the catchments within Victoria – Cascade Connections. This year 38 facilitators and coordinators were supported at the end of April with this event.

## Land Health Strategy implementation

Long-term strategy implementation progress	2022-23 performance
Strategic objective: Practice adaptive management	
<p>Activities have continued to focus on meeting community needs supported by the RCS through investment priorities of the Australian Government's National Landcare Program, through our From the Ground Up project.</p> <p>Activities are delivered under five national investment priorities: soil acidity, soil organic carbon, hillslope erosion, native vegetation and biodiversity on-farm, and climate change adaptation.</p> <p>Activities are delivered by Landcare networks and groups, industry groups, Conservation Management Networks, the University of Melbourne, Agriculture Victoria (AgVic) and Goulburn Broken CMA (see partners box page 69).</p> <p>Participant surveys provide evidence that landholders make changes to their land management because of participating in program activities.</p>	<p>From the Ground Up supported 20 demonstration sites of new and emerging practices in the Goulburn Broken catchment. Most of these sites continued from 2021-22. Sites included regenerative grazing management, the impact of different crops and soil treatments on soil carbon levels in cropping soils, options for soil carbon management in permanent pastures, measurement and management of grazing impacts on soil nutrient redistribution, dung beetle nurseries and cultivating indigenous food crops with training in their nutritional value and productivity. Field days were held at demonstration sites.</p> <p>From the Ground Up delivered 27 workshops in soil structure and fertility, soil test interpretation, indigenous crop production, holistic management, peer discussion groups, farm shelterbelt design, weed identification, DIY erosion structures and management, soil health and soil moisture monitoring, carbon and biodiversity on farms, dung beetle identification and management, optimising irrigated grain, and insect habitat for pomme fruit orchards.</p> <p>A Goal Attainment Scale survey of From the Ground Up participants in 2022-23 revealed that 89.5 per cent of participants were trialling or had adopted new practices on their property as a result of the project.</p>
Strategic objective: Strengthen partnerships	
<p>Goulburn Broken CMA continues to work to foster and grow partnerships with industry groups, community networks and groups.</p>	<p>Goulburn Broken CMA continued to work with Agriculture Victoria (AgVic) to deliver locally relevant workshops in hillslope erosion management and soil moisture monitoring technology.</p> <p>Goulburn Broken CMA hosted four Landcare Network Chairs meetings to highlight issues and coordinate works specific to Landcare.</p> <p>Goulburn Broken CMA facilitated four Landcare coordinator and facilitator regional meetings and two training opportunities to increase skills and knowledge specific to land health.</p> <p>AgVic continued supporting agriculture service providers to access new information and skills in soil management through their service provider forums.</p> <p>21 project grants were awarded to Goulburn Broken catchment community NRM groups through the Victorian Landcare Grants.</p> <p>15 project grants were devolved through the National Landcare Program's From the Ground Up project. Two project partner meetings were facilitated.</p> <p>Regional Agriculture Landcare Facilitator coordinated 'Connecting Rural Women', a forum to bring women working within the agricultural and Landcare space together.</p> <p>Goulburn Broken CMA contributed to implementation options for the Regional Drought Resilience Plan – Goulburn, led by AgVic.</p>
Strategic objective: Adapt to land-use change	
<p>Land use change in 2022-23 was most influenced by competing demands for land resources between farming, lifestyle and urban land use.</p> <p>Drivers include ongoing population growth and migration from the city to the country.</p> <p>The ongoing challenge is to balance the environmental, social, productive and economic needs as land use change continues and to manage these changes so natural resources, such as soils, water and vegetation, can continue to provide services of high value to people and nature.</p>	<p>Through direct delivery and investment in partners, Goulburn Broken CMA has supported decision-making around new and evolving farming technologies such as organic soil amendments, precision agriculture, regenerative grazing management, irrigation management, and management of soil structure and non-wetting soils. Partners included Vic No-Till, Irrigated Cropping Council, Riverine Plains Inc., South West Goulburn, Goulburn Murray and Upper Goulburn Landcare networks.</p> <p>Through workshops and farm tours, new landholders have been encouraged to engage with natural resource management information and local networks to increase knowledge and skills in land management.</p>

Long-term strategy implementation progress	2022-23 performance
Strategic objective: Support the development of resilient farming systems	
<p>We continue to work with Landcare, producer groups, farmers and AgVic to identify and adapt farming enterprises to have the capacity to respond to change, such as climate variability, changing markets, and are integrated with the natural environment.</p> <p>Interest from graziers in developing resilient pastures in the face of variable and drier seasonal conditions remains high. Resilient pastures comprise high ground cover, perennial species and species diversity for rain-readiness.</p> <p>They are supported by good soil condition for water infiltration and water holding capacity, carbon cycling and storage. Practices include grazing management, soil testing, liming and perennial pasture renovation with annual fodder crops.</p> <p>Interest from cropping farmers remains strong in finding efficiencies through technologies like deep soil testing and soil moisture probes, and in finding ways to improve soil carbon stocks and ground cover without impacting cash crop performance. Interest in integrated pest management and supporting beneficial insects and predators remains.</p> <p>Other resilience building technologies of interest include cover cropping, integrating livestock, addressing soil compaction using compost and soil moisture probes in grazing landscapes.</p>	<p>Goulburn Broken CMA and project partners delivered 38 activities and 20 demonstration sites around resilient farming to 780 participants. Fourteen industry and community partners were involved in delivery. Topics included soil organic carbon, soil carbon trading, regenerative grazing, introduction to soils, soil management and soil test interpretation, compost and biological brews for soil health and erosion management.</p>

## What's next?

- Continue to support community-initiated projects through the Landcare facilitators and coordinators group, and general expression of interest process.
- Continue to coordinate community education opportunities across agencies and build the land health community network, including information and opportunities related to natural capital and environmental services from farms.
- Continue to invest in Landcare, community and industry groups to deliver land health and sustainable farming projects, including information and activity to assist farmers to understand and manage soil and vegetation carbon.
- Link training packages for promotion of improved management practices.
- Internal review of the Goulburn Broken Land Health Strategy 2017-2020 to determine Goulburn Broken CMA's key strategic land health action areas.
- Seek to continue working as a regional delivery partner for the Department of Climate Change, Energy, the Environment and Water and the Department of Agriculture, Fisheries and Forestry to provide environmental protection, sustainable agriculture, and natural resource management services, by supporting the delivery of the next phase of the NHT, including the Sustainable Agriculture Facilitator (SAF) program.
- Continue to be informed and open to opportunities to deliver training and advice to farmers to integrate low emission technologies and practices into their farming operations and land management practices.
- Continue to provide regional input into the National Soil Strategy Implementation Plan and Future Drought Fund, and seek opportunities through these initiatives to support soil health and farm resilience in the catchment.
- Seek to coordinate the implementation of the Goulburn Regional Drought Resilience Plan.

## Works and operations

### Soils for agriculture, purpose and use of private land - Actions 2020-21, 2021-22 and 2022-23

Action		From funds received				
		Achieved <sup>i</sup>			Target	% achieved
		2020-21	2021-22	2022-23		
Fence remnant vegetation	ha	331	157	117	41	286
Irrigation drainage environment plans	no.	-	-	-	-	
New irrigation referrals dryland zone <sup>iv</sup>	no.	4	1	1	-	
Improved irrigation dryland zone <sup>ii,iii</sup>	no.	20	26	-	-	
<b>Sub-surface water action</b>						
Revegetation – plant natives	ha	329	336	505	202	251
Pasture – plant	ha	-	-	-	-	
New groundwater pumps – public installed	no.	-	-	-	-	
<b>Planning for works action</b>						
Whole farm plans - Level 1 <sup>iii</sup>	no.	-	-	-	-	
Whole farm plans prepared - Level 2 dryland zone <sup>iii</sup>	no.	-	-	-	-	

i. Achievements include those by complementary investment areas such as Biodiversity. For a full list of footnotes please see Appendix 4.

ii. An aggregate of properties and irrigated areas receiving intensive extension support for irrigation whole farm planning, system checks, soil moisture monitoring equipment, scheduling and major system changes.

iii. Level 2 is comprehensive and is equivalent to SIR's whole farm plan. Level 1 is a short-course that is a precursor to Level 2.

iv. Unit of measure published previously should have been 'number' and not 'hectare'. Achievement for 2017-18 includes one new irrigation referral in the SIR.

### Invasive plants and animals - Actions 2020-21, 2021-22 and 2022-23

Action		From funds received				
		Achieved <sup>i</sup>			Target	% achieved
		2020-21	2021-22	2022-23		
<b>Weed invasion</b>						
Weeds – aquatic weeds controlled/eradicated	km	8	-	40	-	
Targeted infestations of weeds in high priority areas covered by control programs <sup>ii</sup>	ha	11,533	2,108	4,494	4,118	109
AgVic Biosecurity & Agriculture Services works - Targeted infestations of weeds in high priority areas covered by control programs <sup>iii</sup>	ha	19,234	7,770	15,049	-	
<b>Pest animals</b>						
Pest animal control <sup>iv</sup>	ha	124,720	157,242	98,458	84,828	116
AgVic Biosecurity & Agriculture Services works - Area of high priority rabbit infested land covered by control programs <sup>iii</sup>	ha	3,002	1,830	4,411	-	

i. Achievements include those by complementary investment areas such as Biodiversity. For a full list of footnotes see Appendix 4.

ii. This includes 'Weeds - woody weed management' (Appendix 4).

iii. Works completed by DEECA AgVic Biosecurity & Agriculture Services (outside of the Corporate Plan).

iv. Output included for the first time in 2018-19, superseding the two separate outputs of fox and rabbit control (excluding the DEECA AgVic Biosecurity & Agriculture Services rabbit control), to encompass the broader range of pest animals being controlled. From 2021-22, Victorian Government reporting has split pest animal control into 'Herbivore' and 'Predator' animal control. For continuity of data these have been combined.

## Investment area – Sustainable irrigation

Compiled by: Carl Walters, Chris Nicholson, Caroline Keenan, Carolyn Nigro (GMW), James Burkitt, Joel Pike (Agvic), Mark Potter (GMW), Mark Turner, Megan McFarlane, Bek Caldwell, Simon Casanelia.

### Long-term and annual scorecard <sup>i</sup>

2022-23 performance	On target		
Catchment condition <sup>ii</sup>	1990	2023	Long-term risk
			<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>

Shepparton Irrigation Region (SIR) social-ecological systems depend on highly productive and efficient irrigated agriculture. Some systems are beyond tipping points and are adapting and transforming, creating significant uncertainty and stress.

Increased competition is impacting water availability for agriculture due to increasing demands and climate change impacts threatening farm and regional viability creating a challenge for climate adaptation.

There is increasing concern over rising pH levels along with phosphorus and nitrogen levels in local waterways.

There has been an expected rise in watertables in response to recent flooding. Monitoring of levels will continue.

Undrained catchments in the SIR remain at risk of waterlogging and salinity. Expansion of the Drainage Course Declaration program and continued adaptive management remains fundamental to meeting climate change challenges as well as actively contributing to building the region's resilience.

Land use is changing with nearly a quarter of irrigators (surveyed in Land Use Mapping project) transitioning land use due to reasons such as health, age, and changing ownership. The cumulative and fast rate of change (e.g. increase in larger, corporate farms) is creating concern about the impact on native vegetation such as paddock trees and historic plantings, and other natural resources.

Recent floods and storms have had variable impacts on local businesses that rely on irrigated agriculture. Workforce challenges are also being experienced within the agricultural industry.

Resilience assessment						Long-term strategic implementation <sup>v</sup>	
Critical attribute affecting long-term catchment health	Contribution to system function <sup>iii</sup>		Risk to system thresholds/tipping point <sup>iv</sup>				
	1990	2023	Trend 2020-23	Long-term (10+ years)			
				Current support <sup>vi</sup>	No support <sup>vi</sup>	Start	Stage
Water availability for the environment				<span style="background-color: #27ae60; color: white; padding: 2px 5px;">MEDIUM</span>	<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>	2011	Early
Water availability for agriculture				<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>	<span style="background-color: #c0392b; color: white; padding: 2px 5px;">VERY HIGH</span>	2015	Escalated response <sup>vii</sup>
Water quality				<span style="background-color: #27ae60; color: white; padding: 2px 5px;">MEDIUM</span>	<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>	1995	Watch & adapt
Watertables				<span style="background-color: #27ae60; color: white; padding: 2px 5px;">MEDIUM</span>	<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>	1983	Watch & adapt
Native vegetation extent <sup>viii</sup>				<span style="background-color: #c0392b; color: white; padding: 2px 5px;">VERY HIGH</span>	<span style="background-color: #c0392b; color: white; padding: 2px 5px;">VERY HIGH</span>	1997	Middle
Farm and regional viability				<span style="background-color: #f1c40f; padding: 2px 5px;">HIGH</span>	<span style="background-color: #c0392b; color: white; padding: 2px 5px;">VERY HIGH</span>	2015	Escalated response <sup>vii</sup>

Certainty of ratings is high. Certainty around water quality and water tables information is very high (strong long-term monitoring and evaluation). Certainty around native vegetation and water availability for agriculture is high (reasonably consistent long to medium-term monitoring and evaluation). Certainty around water availability for the environment and farm and regional viability is medium (mixed consistency or shorter-term monitoring and evaluation).

- i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.
- ii. Critical attribute contributions and risks are major considerations in rating catchment condition, along with indicators on higher-level outcomes from managing these critical attributes, such as viability of threatened species and gross value of agricultural productivity. Long-term risk assumes ongoing support at current levels.
- iii. System is Agricultural Floodplains social-ecological system; benchmark for contribution is the desired level, as defined (formally or informally) in 2023.
- iv. Risk that system will not be in desired state of resilience in the long term because of level of critical attribute contribution. Risks can be from biophysical threats, such as climate, or other, such as community's adaptive capacity. Desired state might be other than current state.
- v. Long-term strategies vary significantly in formality. 'Start' approximates when holistic, integrated approach to influencing critical attribute began.
- vi. Support includes government funding and community (including individual) in-kind and financial investment for onground works and helping communities and individuals adapt.
- vii. 'Escalated response' recognises that the situation has shifted so significantly that difficult and sensitive questions about transformation and transitioning must be considered.
- viii. These vegetation attributes recognise that threatened species are part of ecological systems.

## Government investment, \$000

2020-21	2021-22	2022-23	2023-24 <sup>i</sup>
4,074	5,971	5,164	1,841

i. Budget is based on the Corporate Plan 2023-24.

### SIRLWMP Vision and Purpose

*The Shepparton Irrigation Region community leads Australia in producing food in harmony with the environment.*

*The purpose of the plan is to support and grow the natural base that is vital for agriculture, biodiversity and people to jointly flourish.*

### Strategic references

Strategies for many themes, such as biodiversity and river management, prepared by the Goulburn Broken CMA and state and national organisations, are integrated in the SIR Land and Water Management Plan (SIRLWMP) 1990-2020. Murray-Darling Basin Authority and Victorian Government water and agricultural strategies are also included.

### Background

The Victorian Government-endorsed final update of the SIRLWMP was launched in 2017. The Sustainable Irrigation Program delivers on the vision through onground works supported by the community-based Shepparton Irrigation Region People and Planning Integration Committee (SIRPPIC).

Since 1990, the SIRLWMP has evolved from focusing on salinity to managing five attributes critical to how the region functions as a system of people and nature:

- water availability (for the environment and for agriculture)
- water quality
- watertables
- native vegetation extent and
- farm and regional viability (which evolved in 2018 from 'farm and food-processor viability').

The approach reflects Goulburn Broken CMA's emphasis on resilience. The SIRLWMP is implemented by sharing decisions around social-ecological system risks and opportunities. Integration of actions to achieve multiple benefits in terms of critical attributes remains a key principle and a report against eight priorities is included below.

During 2021, achievements from implementing the SIRLWMP since 1990 were presented to the regional community. This is the first step in renewing the SIRLWMP. In 2022, the renewal of the SIRLWMP 2050 commenced in partnership with the regional community and a range of stakeholders. Work during 2022-23 has included: considering future directions, things we value in the region, drafting a Vision and reviewing the critical attributes for the Plan going forward.

Reporting on regional land salinisation and Murray River salinity impacts is included under Watertables (page 78). Additional salinity management in the broader Goulburn Broken catchment is reported under Land (page 67).

## Catchment condition - Sustainable irrigation (since 1990)

The SIR's social-ecological systems are transforming: several key tipping points are breaching, creating uncertainty and significant human and environmental stress.

Over the past three decades, the SIR community has responded to challenges, created opportunities, and contributed more than its share to the broader Murray-Darling Basin objectives. The community has pioneered approaches to salinity management, water quality improvement action, water sharing for all uses, biodiversity protection in a heavily populated landscape, and building stakeholder partnerships.

While it is proving difficult for government to maintain appropriate levels of support, the SIR's future remains in a diverse and productive agricultural system within a landscape where amenity usage is increasing.

A key challenge is to keep building capability to take advantage of strong regional networks, natural assets, existing regional and farm infrastructure and proximity to markets. Coronavirus (COVID-19), 2019-20 fires and the widespread 2022 floods remind us we are part of nature and that food production must be environmentally sustainable.

### Water availability

Most of the Goulburn Broken catchment's water flows through the SIR. The Catchment generates 11 per cent of Murray-Darling Basin water.

Extended dry sequences linked to climate change are reducing storage inflows, while water demand has escalated to meet environmental requirements and the world's increasing food demands. Water is also being transferred out of the SIR to other parts of the system as Murray-Darling Basin water users and communities adjust to a different water future. Inter-valley transfers of water to help meet downstream demand, such as from the Goulburn to the Victorian, New South Wales or South Australian Murray systems, have caused high unseasonal flows which have impacted on streambank stability along the Murray River and lower Goulburn River.

### a Water availability for the environment

Many of the SIR's rivers, streams and floodplain wetlands are nationally and internationally significant, including the Ramsar-listed Barmah National Park.

Water began being stored and deployed specifically for the SIR's environment in the early 1990s. There was mixed success in those pioneering years because the small volumes of water available for the environment also relied heavily on natural flows to meet objectives, such as getting waterbirds to nest and raise their young through to the fledgling stage.

The 8,662 gigalitres of water delivered for the environment since the early 1990s have targeted diverse objectives and sites such as: public land biodiversity of the Barmah-Millewa Forest floodplain, Kinnairds Wetland near Numurkah and Reedy Swamp near Shepparton; private land biodiversity of Yambuna wetland; and water quality of the Goulburn River and Broken Creek.

More water has been made available for the environment by reducing losses in the public supply system, as well as purchase of water from irrigators. In recent years, a marked

increase in water delivered for the environment has reduced environmental risks, sometimes significantly.

See also Stream flows and wetland inundation in the Waterways section page 38.

### b Water availability for agriculture

**Long-term objective: Maintain delivery of 880,000 megalitres for agriculture within the SIR (in an average season of 100 per cent allocation).**

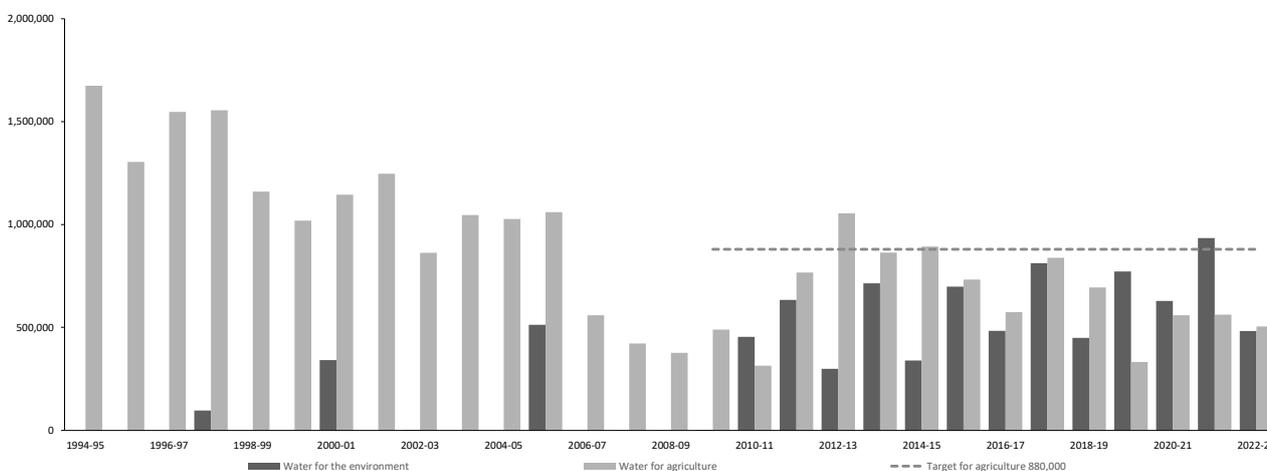
Irrigators are continuing to adapt to reduced long term water availability as well as innovating and investing in other changes within a modernised delivery system. The SIR's prosperity depends on water being available at the right price for a range of irrigated agricultural enterprises. The diversity of agricultural industries in the SIR provides some ability for the region to remain responsive and adaptive to a range of

water availability scenarios.

Downstream of the SIR, large horticultural enterprises continue to increase water use for new permanent plantations and maturing trees. In drier years, horticulture usually outbids dairying and others for water, resulting in significant net trade of water downstream. Deliveries of water in the SIR have declined significantly and are at risk of reducing further. The 880 gegalitres delivery threshold is under review and is being considered in the renewal of the SIRLWMP in 2022-23.

However, the SIR remains attractive for investment in water use and irrigation development when low long-term costs are factored in, such as transporting goods to market and water delivery losses. Since 1990, irrigators have invested \$2 billion in farm works and have increased productivity while using less water.

**Water delivered for the environment<sup>i</sup> and agriculture in the SIR, megalitres**



<sup>i</sup> includes the New South Wales part of the Barmah-Millewa Forest.

### Water quality

**Long-term objectives:**

- *Manage the salinity impacts on the Murray River at Morgan (in South Australia) from implementation of the Shepparton Irrigation Region Land and Water Management Plan at or below the 8.9EC credit allocated to the Goulburn Broken CMA by the Victorian Government to meet MDBA's requirements.*
- *Reduce potential total phosphorus loads by 65 per cent by 2016 (from the benchmark of 361 tonnes).*
- *Reduce total phosphorus loads from irrigation drains by 50 per cent by 2016 (from the benchmark of 169 tonnes).*

SIR surface water is naturally of good quality and is generally suitable for various human and environmental uses. Water quality has also improved significantly since 1990 and meets the above long-term objectives.

The SIRLWMP focuses on keeping water quality within defined thresholds for three categories:

- salinity in the Murray River
- nutrient loads and
- other water quality issues.

Salt loads from the SIR entering the Murray River are minimal compared to load contributions by downstream irrigation

regions. The SIR also contributes significantly less salt than the amount allowed under that allocated by the state.

The SIRLWMP balances farm salinity and productivity with removal of salt from the landscape for disposal. Saline groundwater, irrigation channel and drain flows are disposed of through tight operational procedures. Counterintuitively though, the reduction in relatively fresh water from the SIR through more efficient use of water, impacts on the predicted salinity at Morgan in South Australia increasing the theoretical usage of EC credits.

Since 1990, SIR salt loads have notably declined: a drier climate and large-scale water-use efficiency projects have significantly reduced water flows and associated salt in SIR channels and drains that outfall into the Murray River. The Goulburn Broken Water Quality Strategy implemented between 1996 and 2016 reduced nutrient loads and therefore blue-green algae blooms.

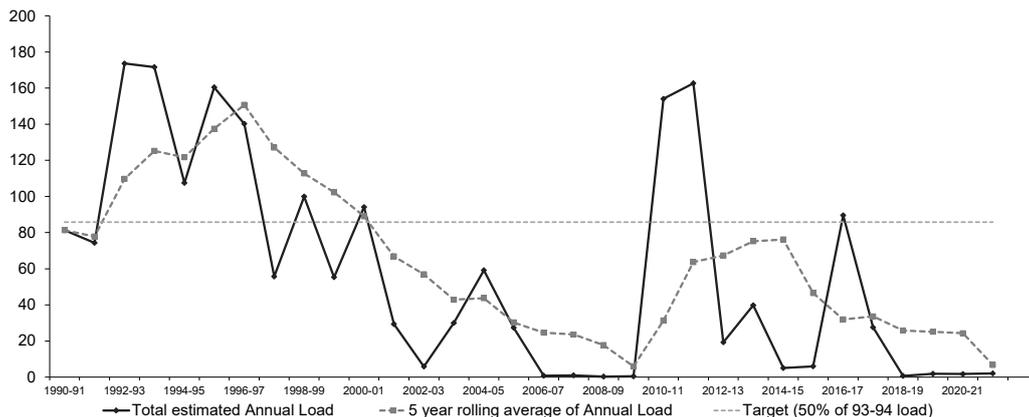
As for salt, nutrient loads have also been reduced by the decline in water volumes out-falling into streams from channels and drains. As well as a drier climate, actions directly implemented under the SIRLWMP or influenced by the SIRLWMP have been major contributors to nutrient reduction.

Actions include farm reuse dams, diversion storages, improved dairy effluent management, reduced streamside

grazing, upgraded water treatment plants, improved drain design, improved streamflow management, and improved streamside native vegetation.

The regularly reported five-year rolling average total phosphorus loads from both the overall Goulburn Broken catchment and from irrigation drains (see graph below) are below the long-term targets. Spikes in phosphorus loads are caused by significant rainfall events and this was evident in the 2022 floods across the region. Water quality strategy actions have helped to reduce the frequency and severity of these spikes in loads.

**Annual phosphorus loads from all irrigation drains in the Goulburn Broken catchment, tonnes/year**



## Watertables

**Long-term objective:** By 2020, minimise irrigation-related salinity impacts from shallow watertables on 500,000 hectares.

The long-term objective of the Goulburn Broken CMA Shepparton Irrigation Region Land and Water Management Plan (SIRLWMP) is to minimise irrigation-related salinity impacts from shallow watertables on 500,000 hectares by 2020. Saline watertables that are close to the land surface or that rise rapidly after a rainfall event can cause waterlogging and salinity, threatening agricultural and regional productivity. This poses significant threats to agricultural and regional productivity, as well as wetlands and streams both locally and downstream for hundreds of kilometres.

Over the lifespan of the SIRLWMP, we have made remarkable progress in reducing watertable risks through ongoing adaptive management of various measures. Watertable risks have reduced because of lower accessions (less water reaching the watertable) and active measures to mitigate when watertables are high or rising. More specifically, watertable accessions have reduced due to a number of factors including:

- water-use efficiencies on farms from major, widely-adopted improvements
- water-use efficiencies in the regional irrigation delivery system from major upgrades (reduced losses from channels)
- better and more extensive surface water drainage systems
- less rainfall directly on wet land due to a drying and changing climate
- less water being available to irrigate and
- land use change, driving changes in irrigation.

Waterways are generally within the Environment Protection Authority's thresholds for most other water quality issues. An increase in the alkalinity of water in lower Goulburn River and Lower Broken Creek will require investigation, however a watching brief remains appropriate (mainly for sudden events and negative long-term trends). Goulburn Broken CMA and regional agency partners are managing increasingly frequent of blackwater events caused by significant rainfall events.

Active management of high or rising watertables includes a stronger focus on protecting the rootzone within the soil profile. This has more recently resulted in greater tailoring of solutions and targeting of higher-risk areas rather than broadscale, heavily engineered approaches. The solutions are also less costly, adaptive, and integrate better with farm, local and regional needs.

Goulburn Broken CMA and Goulburn-Murray Water jointly manage drainage to support agriculture and the environment. Drainage management is tailored to meet varying risks across the SIR's 460,000 hectares of irrigable land, and it remains a high priority in sub-catchments where drainage improvement is still needed, covering 103,000 hectares.

Surface drainage and groundwater pumping buffer and manage watertable accessions resulting from intense rainfall events which tend to be localised, random and increasingly occur in summer.

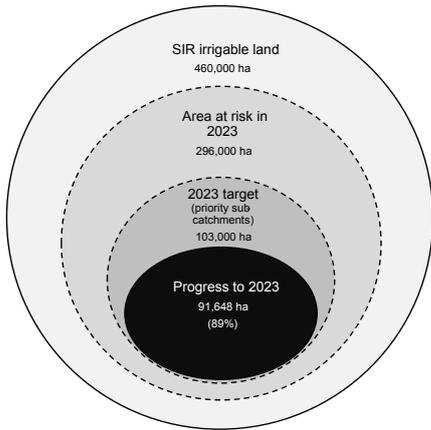
Drainage Course Declarations (DCD) and associated obstruction removal programs developed and implemented since 2017 as part of the hybrid drainage program, through the SIRLWMP, avoid the need for large excavated drains, land acquisition and reinstatement of on-farm works. Works to remove obstructions within the declared drainage course, connect fragmented natural drainage lines to restore natural flow paths within the catchment. The DCDs and associated Management Plan implementation provide economic, social and environmental benefits by contributing to reduced water logging and salinity impacts, which in turn will benefit agricultural productivity, environmental values and infrastructure.

In 1988, the SIR had 188,000 hectares (more than one-third) with watertables within two metres of the surface (one indicator of 'high' and being 'at risk'). In 2020, this area had reduced to just 15,000 hectares, and then reduced further to

approximately 8,350 hectares in 2021. Although it is prone to change: rainfall on a wet catchment is now known to cause both rapidly rising shallow watertables and the re-emergence of related threats, as happened in the wetter years of 2011, 2016 and more recently in late 2022.

Drier conditions in 2018 and 2019 resulted in further contraction in land areas with high watertables, with more average winter rainfall leading to a marginal expansion of high watertables in 2020 and 2021. Following the Spring floods in 2022 the revised December 2022 watertable mapping produced showed some significant rises. In 2020, 296,000 hectares of the SIR remain 'at risk' in the long term from waterlogging and salinity.

**Progress in managing salinity impacts, Shepparton Irrigation Region**



**Native vegetation extent**

*Long-term objective: By 2030, the extent of native vegetation will be increased by two per cent across nine focus landscapes.*

Native vegetation extent is a key critical attribute in the SIR Land and Water Management Plan. Native vegetation is crucial for the health of the environment, it helps to support ecosystem services such as pollinators and other animals, stabilises soil, and purifies water.

During the twentieth century, agricultural development in the SIR rapidly changed the landscape through removal of native vegetation, including the loss of many flora and fauna species. More than 97 per cent of plains grassy woodland on private land was cleared.

Remaining native vegetation on private land is largely fragmented and despite ongoing works by stakeholders including private landholders, many remnants lack the shrubs, ground layer, fallen logs and other habitat elements for hosting diverse flora and fauna. However, many significant remnants remain predominantly on public land such as Barmah National Park (28,520 hectares), Lower Goulburn National Park (9,310 hectares), Broken-Boosey National Parks and significant roadside vegetation.

The SIR community have been working together to improve the amount of native vegetation, its quality and its connectivity through the landscape. Significant habitat benefits have been gained on public and private land since 1990 by integrating native vegetation into complementary SIRLWMP activities (see graph below). This includes a focus on protecting and enhancing private land remnants and creating connections to existing remnants such as public land reserves and roadsides and works to improve native vegetation extent.

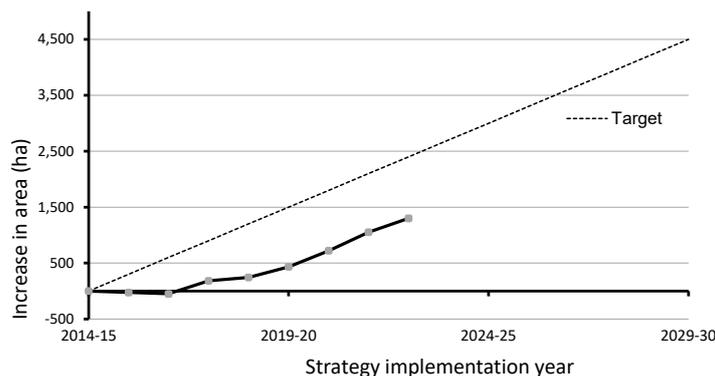
Implementation of key management plan actions continue for many significant wetlands, such as Reedy, Doctors, Bray's, Kinnairds and Black swamps, and for smaller reserves with native vegetation. These wetlands benefit from environmental water delivery and monitoring through extensive stakeholder partnerships.

Despite ongoing efforts to improve native vegetation extent, the scale of change is still not enough to ensure long-term survival of all native species. Many species are at very high risk now and the system is at very high risk of tipping into a further undesired state. Sadly, incremental clearing continues to occur, particularly through direct removal either permitted or illegal.

'Focus landscapes' are small habitat sub-systems within the SIR with the most potential for significant habitat to be protected, restored, and connected. Targeting works in these landscapes increases native vegetation extent, improves connectivity and provides many species with a bridge to the future.

Native vegetation extent increased by 247 hectares across the nine focus landscapes of the SIR in 2022-23, which is 10.3 per cent of the 2400 hectare cumulative target by 2022-23. This brings the total native vegetation extent increase to 1300 hectares in the SIR since 2014-15. This is 28.9 per cent of the 2030 target of 4,500 hectares, placing us well behind schedule.

**Native vegetation extent across nine focus landscapes in Shepparton Irrigation Region, ha<sup>i</sup>**



i. This graph illustrates the SIR data, a subset of the Catchment wide biodiversity data.

## Farm and regional viability

*Long-term objective: Help farm and food processors to continue to be viable, by supporting the natural base in a way that helps them adapt quickly to changing agricultural markets and demands.*

Since 1990, farmers have faced a changing climate, variable domestic and world markets, and increasing costs of land, irrigation water, nutrients, energy, and technology. Seasonal conditions, climate change, labour shortages, fluctuating commodity prices and transformative changes in water, agriculture and planning policy have been driving more recent rapid changes across the irrigated landscape. Land and water use change continue to be monitored through the SIRLWMP to build further understanding of how irrigated agriculture is changing across the region. It is clear however, that this region remains a viable and attractive place for irrigated agriculture and is an integral part of Victoria's food bowl.

Irrigation farmers and irrigation-dependent industries have responded by continually innovating and diversifying. Agricultural productivity has increased significantly while using less water and improving technologies and market diversity.

Since the start of SIRLWMP implementation, farmers have been supported to upgrade irrigation infrastructure and improve water-use efficiency. Between 2008 and 2020, a \$2 billion state-of-the-art irrigation delivery system was installed (the GMW Connections Project). It has been complemented by world-class farm infrastructure and management, partly through the Farm Water Program which saved over 80 gigalitres water on farms from 2010-2018.

Demands for advice on energy efficiency and efficient irrigation systems have grown in response to increased energy and water costs. Through SIRLWMP support, irrigators have implemented changes saving both energy and water after having both the energy needs and the irrigation efficiency of their existing irrigation systems assessed.

Indigenous participation in agriculture and natural resource management has increased through indigenous ownership of farmland, supported by the Sustainable Irrigation Program's involvement in the Tri-State Alliance.

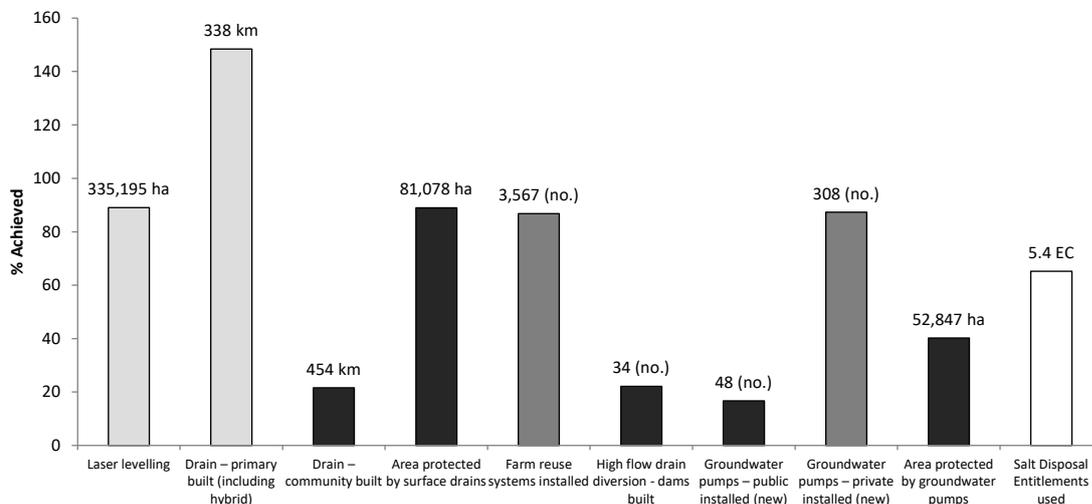
SIRLWMP initiatives are helping make the most of the SIR's natural advantages of sunshine, soils and a flat landscape, rainfall, readily available water and proximity to markets. In 2017-18, the gross value of agricultural productivity in the Shepparton region was \$1.9 billion (13 per cent of Victoria's \$15 billion) (ABS 2019).

As a result of the SIRLWMP, the community knows there are productivity benefits while protecting the natural resource base. However, farmers and communities continually grapple with questions around how to adapt and thrive in the face of rapid changes, including a future with even less water. Continued government incentives and extension services are still needed to help farmers and the community know when to persist with current approaches and when to adapt or transform.

As farm systems and irrigation-dependent industries transform, many localities experience uncertainty and stress. This threatens both the social fabric that enables communities to cohesively adapt and the viability of farm enterprises that allows them to invest in change and the environment. Small family farms that dominated the land ownership mix in 1990 are moving to larger enterprises. This forces adaptation of approaches in engaging people in the SIRLWMP.

Awareness of the benefits of living in areas like the SIR has grown during the COVID-19 pandemic. This will create significant opportunities and challenges for our agricultural systems, environment, and communities.

## SIR Land and Water Management Plan's 1990-2022 target achieved, %<sup>i</sup> (achievements listed on top of each bar)



i. The method to set the cumulative target was modified in 2012-13 to be: 1990-2020 plan target multiplied by the number of years since 1990 divided by 30.

## Long-term strategy implementation progress and 2022-23 performance

Progress towards long-term strategy implementation is satisfactory in some areas but falling behind in others (see the bar chart on page 80). Further details are provided below.

Long-term strategy implementation progress	2022-23 performance
<b>Priority: Update irrigation infrastructure, including the irrigation delivery system and farm design</b>	
<p>Irrigation modernisation, which began through the GMW Connections project in 2008 and the Farm Water Program in 2009, helps reduce salinity threats and achieve water savings for the environment and irrigators.</p> <p>At June 2023, incentives for 4,529 whole farm plans have translated into large-scale changes creating water-use efficiencies across 332,435 hectares.</p> <p>In recent years the emphasis of government investment has shifted from farm infrastructure to planning and advice on best practice.</p>	<p>Increasing energy costs meant that demand for irrigation system efficiency and energy assessments continued to remain strong throughout 2022-23. Assessments revealed many cost-effective changes that could be made to pressurised irrigation systems, both old and new, that would result in both large cost savings and improvements in the irrigation efficiency.</p> <p>In 2022-23, 32 plans were completed. These plans consisted of 18 'new' plans and 14 'modernised' plans. An additional seven plans were completed that were involved with reconfiguration works as part of Goulburn-Murray Water's Water Efficiency Project.</p>
<b>Priority: Build natural resource management into the farming system</b>	
<p>As at June 2023, whole farm plans (WFP) in the SIR have been completed on 4,529 properties covering 332,435 hectares and a further 532 'modernised' plans covering 62,816 hectares have been done.</p>	<p>2022-23 initially saw strong demand for the whole farm plan incentive scheme however works in this project came to a complete stop in October 2022 with widespread flooding of the catchment. Once flooding subsided demand once again increased largely driven by individual landowners desire to improve on farm drainage. The Agricultural Redevelopment Coordinator (ARC) Pilot Project continued to help numerous new redevelopment projects in 2022-23. Like the whole farm planning project a large percentage of the enquires were drainage related with the ARC working closely with Goulburn-Murray Water to determine solutions.</p> <p>The One Data Information Platform project was completed. This project investigated ways of making land and water information at a property level more accessible and made recommendations on how this could be achieved.</p>
<b>Priority: Reconnect large areas of enhanced nature</b>	
<p>Delivering outcomes in focus landscapes is the priority to increase extent and connectivity of native vegetation across the region.</p> <p>These focus landscapes prioritise areas where large areas of native vegetation remain, such as along waterways, roadsides, in and around wetlands, scattered remnants and paddock trees. Connecting these areas aims to provide continuous habitat for wildlife to move through the landscape.</p>	<p>National Landcare Program (Regional Land Partnerships), State funded biodiversity project and National threatened species (Environmental Restoration Fund) projects continue to implement revegetation and enhancement works such as: Linking Landscapes, Swift Parrot Pantry and Taking Care of Country.</p> <p>Onground works (e.g. turtle monitoring and pest plant and animal control) continued in the Ramsar listed Barmah National Park.</p>
<b>Priority: Build stewardship, incorporating local action and ideas</b>	
<p>SIR farmers and irrigation-dependent industries have responded to challenges by continually innovating and diversifying. Agricultural productivity has increased while using less water and impacting less on the landscape.</p> <p>People and their relationship with the region's natural resources is critical to the success of the SIRLWMP. Stewardship of natural resources and the environment is encouraged. Community leaders are promoting the region within and beyond its boundaries to help manage issues through partnerships between with the community, agencies and policy makers.</p>	<p>As part of the Tri-State Alliance's Follow the Flowers project the Goulburn Broken CMA has continued to provide advice and guidance to the Rumbalara Aboriginal Cooperative as they develop an agricultural business involved with both honey production and cut flowers. Initial advice has also been provided to the Njernda Aboriginal Corporation who have also joined the Follow The Flowers project.</p> <p>The Goulburn Murray Resilience Strategy was completed in June 2020 and is being implemented under the direction of the GMID Resilience Taskforce. The strategy is a response to the macro drivers of change that are impacting on the GMID – both positive and challenging. Activities from intervention areas underway in 2022-23 include awareness raising of the Strategy, circular economy, ARC project, identification of future opportunities and community leadership.</p>

Long-term strategy implementation progress	2022-23 performance
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Priority: Balance water availability for all uses

<i>Water for the environment</i>	
<p>Goulburn Broken CMA continued working with delivery partners and the community to maximise environmental benefits of operational deliveries including inter-valley transfers (IVT) to meet environmental flow objectives.</p> <p>Six seasonal watering proposals were prepared in 2022-23.</p> <p>Environmental water delivery began in the Broken River and mid Goulburn River in 2017-18, and upper Broken Creek in 2015 to manage poor water quality.</p> <p>Environmental water deliveries were managed to minimise impact on Cod opening each year.</p>	<p>Key SIR environmental water achievements included:</p> <ul style="list-style-type: none"> <li>— Environmental water was used to deliver a Goulburn River winter fresh to provide: platypus nesting cues; deposit seed and sediment on the banks; improve bank soil moisture; increase habitat and food resources for native fish and other aquatic fauna; and connect off-stream habitats. Environmental water was delivered to Barmah Forest in July to: increase habitat and food resources for native fish; water birds and other aquatic fauna; and support the growth of wetland vegetation. The watering action also increased flows and improved environmental outcomes downstream of Barmah-Millewa Forest in the Murray River channel and in the Edward-Wakool River system.</li> <li>— Following record breaking flood events across the catchment between October and December, environmental water was delivered to the Goulburn River, Broken Creek, Nine Mile Creek and Barmah National Park between January and June. Environmental water deliveries maintained water quality, provided instream habitat for aquatic fauna and supported waterbird breeding in Barmah NP.</li> </ul> <p>Total amount of environmental water delivered in 2022-23 was about 278 gigalitres plus an additional IVT volume of around 297 gigalitres.</p>

<i>Water for agriculture</i>	
<p>Understanding water availability and how it interacts with farm and regional viability and the environment is a key challenge for the regional community. There continues to be many reviews and discussions at the basin, state and regional level.</p> <p>Government incentive programs have helped irrigators adapt as the social-ecological system transforms to a future with less water. For example, 600 projects implemented through the 2010 to 2018 Farm Water Program improved water-use efficiency and productivity over 70,000 hectares and saved over 80 gigalitres of water.</p>	<p>Demand for advice in relation to groundwater use and management increased during 2022-23 due to the October 2022 flooding as landowners sought advice on how to manage an increase in higher shallow groundwater tables.</p> <p>AgVic extension staff continue to provide support to irrigators around the use and risks of using groundwater resources through the whole farm planning program.</p> <p>The Northern Victoria Irrigation Development Group, which oversees the Northern Victoria Irrigation Development Guidelines, met on a regular basis to progress new development approvals thus ensuring consistency in the approval of these developments across Northern Victoria. The joint North East and Goulburn Broken CMA project Our Water Futures held a couple of workshops to increase the regional community's ability to adapt to a changing water future. Four actions were identified in the August 2022 workshop.</p>

Priority: Adapt by understanding change and impact

<p>The adaptive process in place since the 1990 SIRLWMP continues to be strengthened by more explicitly linking the long-term condition outcomes sought to the annual workplans through the annual critical attributes risk assessment. SIRPPIC is involved in this process.</p> <p>In 2022-23 this work was boosted as part of the SIRLWMP 2050 renewal process.</p> <p>The use of land and water in the SIR has been rapidly changing in recent years and must be understood to achieve good NRM decisions. The GMID Regional Irrigated Land and Water Use Mapping project provides data on land use by industry, such as dairy, cropping, horticulture, and livestock, and on water use (from water use licences).</p>	<p>SIRPPIC assessed the drivers, trends and risks to the five critical risks identified in the SIRLWMP. This annual process provides a way for the community and partners to reach a joint understanding of the current risks and impacts, as well as to identify actions to mitigate, adapt or even transform.</p> <p>The critical attributes have been reviewed as part of the SIRLWMP 2050 renewal and a new attribute has been added (Community Resilience) and Water Quality and Watertables are to be amalgamated.</p> <p>Data collection for 2021-22 GMID Regional Irrigated Land and Water Use Mapping including spatial data and Farm Irrigation Survey, was completed (including the analysis of the data), with eight fact sheets in development. A statewide data dashboard was developed for 2015-16, 2018-19 and 2019-20 data through the Technical Working Group partnership. This data helps to increase knowledge around the impact of land use changes.</p> <p>The Goulburn Murray Resilience Strategy was launched in December 2020 with a community driven taskforce established in 2021 to implement the actions from the Strategy. Activities from intervention areas underway in 2022-23 include awareness raising of the Strategy, circular economy, ARC project, identification of future opportunities and community leadership.</p> <p>A number of conference papers for work as part of the SIRLWMP were presented at the IAL and ICID Conferences in Adelaide in October 2022.</p>
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Long-term strategy implementation progress	2022-23 performance
<p>Priority: Match drainage to meet changed needs, aligning it with modernised irrigation delivery</p>	
<p>Goulburn Broken CMA, GMW and other key catchment partners are jointly implementing drainage management strategies and operational regimes that support future agriculture and protect and enhance the environment.</p> <p>Drainage is tailored to meet varying risks across the landscape, especially for the priority sub-catchments of the 460,000 hectares of irrigable land. Against a 2023 target of 103,000 hectares in the SIR's priority sub-catchments needing drainage, 91,648 hectares of farm, community and regional surface and sub-surface drainage networks have been protected (see figure page 79).</p> <p>Works achieved through the SIRLWMP to 2023 include 840 kilometres of drains built, 3,567 irrigation reuse systems installed, 356 groundwater pumps installed and 336,445 hectares of land laser levelled. A salinity-risk website launched in 2018 has continually been updated and is increasingly used by farmers to help them understand and manage risks specific to their properties.</p>	<p>Drainage Course Declaration (DCD)-based hybrid drainage planning and delivery including:</p> <ul style="list-style-type: none"> <li>— Formal declaration of the Murray Valley West DCD in October 2022.</li> <li>— Completed extensive landowner engagement, on ground survey, engineering review, ecological assessment, cultural heritage assessment and approved CHMP in the Murray Valley West DCD catchment.</li> <li>— The DCD obstruction removal works program is expected to commence in the summer of 2023-24 subject to funding.</li> <li>— Extensive landowner and GMW engagement to complete the final Waranga Drainage project drain and outfall pump design is complete.</li> <li>— Tender awarded in June 2023 to construct the Waranga Drain outfall pump commencing in August 2023. Waranga drain remediation and extension works are scheduled for summer 2023-24. Formal DCD gazettal process planned for August 2023.</li> </ul> <p>Investigation and landowner engagement to further scope future DCD catchments has continued during 2022-23, with landowner engagement and catchment investigations during and post flood informing planning. The GMID Drainage Management Strategy has been endorsed by all partner agencies and released.</p>
<p>Groundwater resources in the Goulburn Broken catchment are managed by GMW, supported by partner agencies.</p> <p>Around 990 observation bores in the SIR are monitored annually by GMW, resulting in mapping and assessment of shallow groundwater levels across the Murray Valley, Shepparton, Central Goulburn and Rochester irrigation areas. The maps inform plans for adaptively managing salinity and high watertables.</p>	<p>A new Power BI based Integrated Management System (IMS) has progressed to final development stage in 2022-23. Improved subsurface drainage information analytics and business intelligence, mapping, tracking and decision support systems as an outcome of the implemented Public Groundwater Pump optimisation project (now in its final stage), and giving effect to new local operating and receiving water triggers for the pumps.</p> <p>For the SIR monitoring bore network, additional observation bores have been identified and adopted into the network to supplement previously destroyed or decommissioned bores, or to negate unsafe access issues. The current network also includes the observation bores constructed at Gaynor Swamp late in 2020-21.</p> <p>The Gaynor Swamp Filling: A Groundwater Impact Assessment was completed during 2022-23. This found that shallow groundwater beneath the swamp is impacted by surface water infiltration, however this impact is predominantly confined to the footprint of the swamp and does not impact on regional groundwater levels. Shallow groundwater monitoring will continue at Gaynor Swamp to track the dissipation of elevated shallow groundwater levels. Ideally this would have been undertaken during the impact assessment, but this was affected by widespread flooding.</p> <p>Sediment sampling and analysis was undertaken at the Girgarre Evaporation Basin to better understand the possible contaminants present in bay sediments, defining the preferred option to progress to further development and final option costing has been completed.</p> <p>The SIRLWMP Register Entry Review Project has progressed during 2022-23. Three Project Steering Committee meetings were held (July, September and February), as well as a workshop to investigate modelling solutions for the project (August). As a part of this, Goulburn Broken CMA developed its application of the 'effort commensurate with risk' and 'cost efficient and cost-effective management' principles in the development of the method for the review. As a result, Project Steering Committee, Victorian Salt Disposal Working Group and Basin Salinity Management Advisory Panel members supported viewing the register entry as low risk, based on current catchment observations. Following this, an updated Project Plan has been prepared, including draft Project Briefs for the first two stages of the project.</p> <p>Drain water quality monitoring has continued.</p>

Long-term strategy implementation progress	2022-23 performance
Priority: Maintain partnerships and good governance	
<p>The community-based SIRPPIC includes skills, geographic and industry-based representatives from the local community, GMW, AgVic, DEECA, GMLN, Murray Dairy and Goulburn Broken CMA.</p> <p>The Municipal Catchment Coordinator Reference Group is in its 30th year of operation. The group seeks workable and collaborative solutions to improve efficiency and effectiveness of natural resource management delivery in the Shepparton Irrigation Region. Representation includes Moira Shire Council, Campaspe Shire Council, Greater Shepparton City Council, Goulburn-Murray Water and other stakeholders, led by Goulburn Broken CMA.</p> <p>GMW's efficient and adaptive management of regional drainage systems is key to protecting agricultural productivity and the environment. The long-established partnership between Goulburn Broken CMA's Sustainable Irrigation Program and GMW is being strengthened by collaborative drainage initiatives, including flooding response work.</p>	<p>Goulburn Broken CMA continued supporting SIRPPIC, Farm and Environment and SIR Drainage working groups.</p> <p>There were more face to face meetings in 2022-23 as COVID-19 restrictions eased, which was welcomed by the community. Virtual options were also used when appropriate and available.</p> <p>SIRPPIC completed their 2022 Performance Evaluation.</p> <p>SIRPPIC tracked their 2022-23 community engagement plan at each meeting and revised the actions in May 2023.</p> <p>In 2022-23 there was much excitement and anticipation as the renewal of the SIRLWMP 2050 finally got underway. Two workshops were held with the community and key stakeholders in 2023 to identify future pathways as well as consider the draft vision for the Plan.</p> <p>The Sustainable Irrigation Region Senior Combined Partners meeting continued to provide a great opportunity for integration and collaboration.</p> <p>The Municipal Catchment Coordinator role continued in 2022-23, supporting a range of forums and works in conjunction with the three local councils and other partners.</p> <p>The ongoing implementation of the Goulburn Murray Resilience Strategy enabled engagement and discussions with community, stakeholders, agencies and industry around the changing landscape, the resilience principles and how the system worked. This leads to increased focus on the important components of the irrigated landscape.</p> <p>Partner projects remain a strength such as:</p> <ul style="list-style-type: none"> <li>— RiverConnect (including finalisation of their strategic review)</li> <li>— groundwater management and monitoring</li> <li>— Follow the Flowers</li> <li>— water quality partnerships</li> <li>— GMID Land and Water Use Mapping project</li> <li>— circular economy coordination</li> <li>— Municipal Catchment Coordinator reference group (with Moira, Campaspe and Greater Shepparton municipalities).</li> <li>— Goulburn Murray Climate Alliance and</li> <li>— convened the Goulburn Broken Local Government Biodiversity Reference Group, which consists of all Councils in the Catchment, DEECA, Department of Transport and Planning and the CFA.</li> </ul>

## Actions 2019-20, 2020-21 and 2021-22 (Shepparton Irrigation Region only, incl. Rochester)

Action <sup>i</sup>	From funds received					
	Achieved			Target <sup>ii</sup>	% achieved	
	2020-21	2021-22	2022-23			
<b>Surface water action <sup>iii</sup></b>						
Laser levelling <sup>iv</sup>	ha	3,676	719	1,453	1,365	106
Drain – primary built (including hybrid) <sup>v</sup>	km	55.0	-	48	-	
Drain – community built	km	-	-	-	-	
Area protected by surface drains <sup>vi</sup>	ha	7,467	-	10,570	-	
Farm reuse systems installed <sup>vii</sup>	no.	-	-	-	-	
Farm reuse systems installed <sup>vii</sup>	ha	-	-	-	-	
Gravity channel surface irrigation	ha	-	-	-	-	
Pipe and riser irrigation	ha	-	-	-	-	
Irrigation scheduling systems	ha	-	-	-	-	
Pressurised irrigation systems - micro or drip	ha	-	-	-	-	
Pressurised irrigation systems - sprinkler	ha	-	-	-	-	
Irrigation systems - improved <sup>viii</sup>	ha	4,947	719	1,453	-	
<b>Salt disposal entitlements used (SDE)</b>	EC	5.4	5.4	5.4	10.8	50
<b>Planning for works action</b>						
Whole farm plans - new	no.	25	13	21	75 <sup>ix</sup>	52
Whole farm plans - modernised	no.	36	8	18		
Whole farm plans - new	ha	3,057	873	1,732	-	
Whole farm plans - modernised	ha	4,294	565	1,174		

- i. 'Action' includes actions and outcomes. Several measures were included in this list for the first time from 2014-15, although they were listed elsewhere before. Many actions primarily aimed at achieving salinity targets contribute to other targets, such as those for water quality and biodiversity. Fencing remnant vegetation and revegetation achievements are shown in the table on page 65.
- ii. Targets are adjusted as funding is confirmed.
- iii. Surface water management enables the removal of excess rainfall runoff from irrigated lands, alleviating soil salinity. As part of an overall management plan for nutrients, nutrients loads are managed by collecting and reusing water from drains. Nutrient loads are monitored against the Goulburn Broken Water Quality Strategy nutrient target for drains.
- iv. Assumptions: 50 per cent of area put under Whole Farm Plans. Target = 50 per cent of area to be put under Whole Farm Plans [no. (15) x average area of Whole Farm Plans (91)]
- v. Fencing and laneways are relocated along primary drains to control stock. Drains are also hydro-mulched and seeded to provide vegetative cover on bare batters.
- vi. Areas actually measured: 2018-19 Muckatah 2/3P CSWMS 630, Upper Deakin DCD 3,700; 2019-20 Cornella Creek Catchment DCD: 4,300; 2020-21 Guilfus Congupna DCD. 2021-22 Nil.
- vii. Reuse dams allow for the collection of high nutrient run-off and re-irrigation, reducing the water and nutrient loads leaving the farm.
- viii. Assumptions: From 2014-15, area improved = laser levelling (which itself includes an assumption based on whole farm plan area - see footnote iv) + pressurised irrigation systems (micro or drip + sprinkler). In 2019-20, area improved included 210 ha of soil moisture monitoring and 2020-21 included 1,033ha.
- ix. Combined target for the number of new and modernised whole farm plans.

## What's next?

### **Communities and partnerships**

The SIR community has responded strongly to widespread regional flooding in 2022-23 and this response reflects the culture of adaptation and resilience in the way we do things.

The SIRLWMP 30-year achievement summary showed how important community driven action is, and this was confirmed in the SIRLWMP 2050 renewal workshops held in 2023. A new critical attribute been included around community resilience to reflect the importance of ongoing community involvement. This will be worked on further with the community in 2023 as the SIRLWMP 2050 is drafted and aligned with a long-term focus. During 2023-24 the SIRLWMP 2050 will be finalised with the support and involvement of the community, partners and governments. Major actions in 2023-24 planned are:

- renewed and reinigorated SIRLWMP 2050
- support implementation of the Goulburn Murray Region Resilience Strategy
- rebuild regional community confidence to lead on critical issues
- stronger working relationships with indigenous groups
- support and contribute to the new One Basin Cooperative Research Centre and
- establish the new Communities critical attribute and implement the SIRPPIC engagement and communications plan.

### **Water availability**

#### **Coordination and Works**

- continue to build upon indigenous-led involvement in water management and
- provide farmers and agribusinesses opportunities to understand and optimise water availability
- continue advocating the region's perspective in state and Murray-Darling Basin water policy sphere, such as the need for:
  - strong links to the community driven SIRLWMP 2050
  - supporting emerging water leaders
  - improving water efficiency on and off farm
  - balanced and fair water sharing e.g. constraints, Barmah choke, IVT, carry over etc.

#### **Investigations and Information**

- develop long- and medium-term outcomes for the water availability critical attribute and review the thresholds
- improve community and partner understanding and access to water information to help decision-making including through the Our Water Futures project
- interrogate land use mapping information to inform better decisions and work programs and support changing land use opportunities
- provide input into monitoring of new operational rules for the Goulburn River
- improve understanding of ecological responses to environmental watering
- continue investigating the impact from inter-valley transfers of water to the Goulburn River and lower Broken Creek
- support and integrate drought resilience programs into the SIRLWMP 2050

- work with the One Basin CRC to help answer gaps in regional knowledge
- pursue the next iteration in water efficient systems and greater productivity capacity of new systems
- investigate opportunities for land that is now less irrigated and
- better understanding of impacts of climate change i.e. run-off rates, flooding, frost, fire and soil risks as well as native vegetation interactions.

### **Watertables and water quality**

#### **Coordination and Works**

- continue to implement Drainage Course Declarations and associated obstruction removal programs drainage system projects: the Murray Valley West DCD and Waranga Drainage project
- monitor newly drilled observation bores around the perimeter of Gaynor Swamp, assess and report watertable and salinity impacts of environmental watering events
- continue to review, operate and manage the subsurface water management assets to protect land from the impacts of the rise in watertables in response to recent flooding and the following wetter than expected seasons. Monitoring will continue.
- integrate and coordinate water quality programs across the region
- engage and align programs with the EPA's general environmental duty approach
- include water quality as part of the next Waterway Strategy
- facilitate water quality coordination across Goulburn Broken CMA program areas with regional partner agencies
- continue to work closely with Taungurung Land and Water Council and the community to improve the Corop Lakes Landscape planning
- utilise the flood response funding and the Hybrid Drainage system works to build the relationship with Department of Transport and Planning to address the lack of flow through some depression areas and
- pursue the development of information that can assist landholders and the broader community to understand how the catchments work following rainfall events (providing intelligence before rainfall to manage expectations has been proven to help).

#### **Investigations and Information**

- develop adaptive programs that respond to changing needs and risks using resilience principles, such as:
  - storing and making accessible the vast knowledge about watertables, catchment hydrology and hydrogeology
  - develop an integrated management system for the management of the public groundwater pumps, following the network rationalisation, and
  - investigate long-term options for the deactivation or alternative beneficial use of the Girgarre Evaporation Basin (including deactivation trial options)
  - continuing with the enhancement of watertable and water quality monitoring to understand change, inform program agility and delivery as well as meeting regional obligations.

- ongoing implementation and adaptive review of the GMID Drainage Management Strategy
- undertake investigative work to target DCD-based drainage opportunities in other SIR priority catchments; including opportunities to apply DCD-based approaches to achieve integrated drainage, environmental, cultural and social value benefits
- continue developing ways to improve on-farm and off-farm drainage
- contribute to MDBA's Basin Salinity Management Strategy
- review water quality targets and management response and
- continue to develop GIS Story Maps to communicate the successful DCD works programs and investigate impacts of climate change and weather on water quality.

#### **Native vegetation extent**

- improve integration of native vegetation into delivery of the whole farm plan incentive scheme
- continue to advocate for the need for a Goulburn Broken Conservation Fund to improve resourcing of onground works
- continue advocating for improvements to protection of native vegetation under the planning scheme
- continue facilitating partnerships and funding opportunities to increase native vegetation extent and quality
- seek opportunities for improving understanding of native vegetation extent, including both gain and loss and
- ensure Goulburn River health (including streambanks) are not compromised when water is provided to supply downstream demand.

#### **Farm and regional viability**

##### **Coordination and Works**

- implement the Goulburn Murray Region Resilience Strategy with regional partners
- continue to expand on the Agricultural Redevelopment Coordinator (ARC) project particularly in the area of data and information availability
- understand and communicate the implications of changing water use, ownership and policy changes
- continue to coordinate and share the importance and learnings from the Land and Water Use Mapping for the GMID and value-add project opportunities including undertaking mapping of the Regulated Diversions catchments continue to work with and assist indigenous groups who own agricultural land such as Follow the Flowers project
- investigate opportunities to develop collaborative projects that support a circular economy
- continue to respond to increased demand for irrigation / energy efficiency assessments of pressurised irrigation systems and refine the energy assessment tool to meet these requirements and
- refine and implement the earthworks planning exemption process with local government and referral authorities.

#### **Investigations and Information**

- continue to assist indigenous groups develop agribusiness opportunities
- continue to work with universities, regional agencies and industry bodies and the community to bring together the knowledge, effort and funding to improve the resilience of the region
- build on the work from across the world on the use of brackish water to produce high value crops and access the previously untapped poorer quality water
- bring the energy and food production nexus thinking to the irrigated landscape, circular economy, reduced waste and increased use of the systems
- expand the Land and Water Use Mapping to include the regulated rivers and streams, groundwater and the unregulated systems to allow greater understanding of the opportunities and
- work with the community and stakeholders to implement the Broken River Basin review findings.

# Human resources (including occupational health and safety)

Compiled by: Caitlin Baker and Mary Dimit.

## Long-term and annual scorecard

2022-23 performance	On target			
Organisation condition <sup>i</sup>	1990	2023	Long-term risk	Long-term strategic implementation
	n.a.		<b>LOW</b>	Late

i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.

## Government investment <sup>i</sup>, \$'000

2020-21	2021-22	2022-23	2023-24 <sup>ii</sup>
6,108	6,391	6,545	8,676

- i. Excludes board and support committees. These are costs rather than investments. Costs are embedded within other investment areas.
- ii. Budget is based on the Corporate Plan 2023-24.

## Major strategic references

The Goulburn Broken CMA Our People - Workforce Strategy and related action plans integrate direction and guidance from legislation, state and federal policy and plans at national, state, regional and local levels. Appendix 6 includes a more complete list.

## Background

Goulburn Broken CMA fosters a workforce committed to authentic leadership, industry leading expertise and nurturing growth, curiosity and respect for our colleagues, the community and the environment.

We are committed to developing and investing in our people and encouraging innovation and adaptability to respond to opportunities as they present. Goulburn Broken CMA continues to invest in providing a modern work environment and flexibility to provide a contemporary work experience for our workforce.

Goulburn Broken CMA is also committed to providing a healthy workplace; supporting and providing proactive employee-led initiatives and maintaining a focus on both the physical and mental wellbeing of our people and partners.

Goulburn Broken CMA is committed to applying merit and equity principles when appointing staff. Selection processes ensure applicants are assessed and evaluated fairly and equitably on the basis of the key selection criteria and other accountabilities without discrimination. The Authority also has established policies and practices that are consistent with employment standards and provide for fair treatment, career opportunities, the early resolution of workplace issues and also cover conflict of interest, responding to gifts, benefits and hospitality and dealing with misconduct.

## Organisation condition

The People Matter Survey 2022 results indicate the healthiness of the workforce with strong results above comparators in the areas of support for flexible working, providing a healthy and safe workplace and working collaboratively across workgroups. The focus areas for improvement for 2022-23 continued to be around stress, workload and the addition of focus on psychological safety.

Goulburn Broken CMA was able to offer 19 Higher Duties/ Acting opportunities throughout the year, more than double compared to the previous year, amongst other professional development initiatives. The organisation continues to see stability in its workforce with 63 per cent of employees having worked with the organisation greater than five years, and turnover for 2022-23 decreased on the previous year to 10.2 per cent.

Workforce data for the current and previous financial years is contained in the tables on pages 90 and 91.

## Long-term strategy implementation progress

### Human Resources

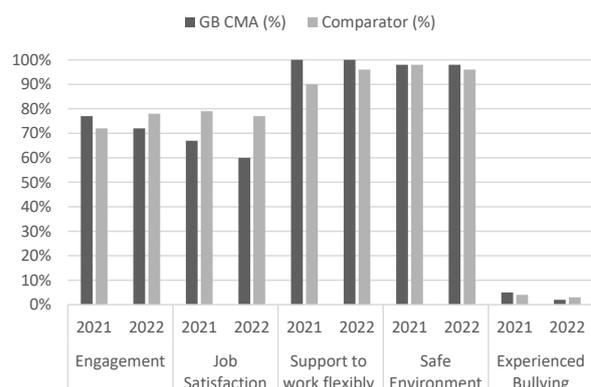
The Goulburn Broken CMA Workforce Strategy and supporting action plans directs strategic priority projects and opportunities for enhancing the Goulburn Broken CMA employment value proposition. 2022-23 saw the review and implementation of the Goulburn Broken CMA Our People - Workforce Strategy which sets out priorities for 2022-2027.

### Occupational Health and Safety

The safety and wellbeing of employees is of the highest priority for the Board, CEO, management and the Occupational Health and Safety (OHS) committee. Goulburn Broken CMA's OHS procedures and practices are based on the model of continuous improvement. The OHS Committee continue to review and update the OHS risk register and controls, investigate incident and hazard reporting and undertake analysis of new or emerging OHS issues and opportunities.

In 2022-23 we built on the capabilities of our Incident and Hazard dashboard to also include a high-level overview of the details of each report, enabling a better understanding of the dashboard data.

### People Matter survey summary results 2022



## 2022-23 Human resources performance

The 2022-23 year saw a relatively stable working environment post impacts of the COVID-19 pandemic allowing return to the office and more certainty through this period. The organisation saw a 17.3 per cent increase in overall staff numbers, moving from a headcount of 52 for 2021-22 to a headcount of 61, which bought additional resources to support workload and project delivery.

Key activities are described below.

### Governance

The Goulburn Broken CMA Enterprise Bargaining Agreement remains in place.

Through the stability of 2022-23, staff were able to fully utilise the Goulburn Broken CMA flexible work framework. As a result, 69 per cent of staff have a formal flexible working arrangement in place, including work from home, reduced hours and/or FTE. In addition to this, the workforce continues to benefit from hybrid working options, providing greater connectivity between offices, reducing travel and supporting work-life balance.

### Attraction and recruitment and labour supply and agility

In 2022-23 we welcomed 15 new employees and farewelled six employees. The turnover allowed opportunity for acting assignments while position review & recruitment processes were undertaken. The tight job market provided challenges in recruitment, and the organisation sought to take progressive strategies to address this, including new approaches and using social media for storytelling and showing the organisation's value proposition. Goulburn Broken CMA trialled a 'talent pool' approach to attracting new talent which had a positive result, with 44 per cent of project positions filled via the talent pool.

### Capability building

Goulburn Broken CMA has continued to provide good quality and diverse learning and development experiences for employees. In 2022-23, 48 employees participated across eight formal knowledge sharing sessions delivered by employees for their peers. Topics for these sessions included: The Uluru Statement from the Heart for NAIDOC Week, Time Management and Hazard and Incident Reporting. 20 staff completed Defensive Driver Training.

### Participation and motivation

Goulburn Broken CMA has continued to support workplace flexibility, and this continues to be a highly valued attribute by staff with 69 per cent of staff having formalised flexible arrangements – a nine per cent increase. The organisation continued to support employees balance work and life demands including continuing to support carers through flexible work options and access to leave, and eighteen staff accessed long service leave.

### Supporting our community

Goulburn Broken CMA has continued to support a community leader to undertake the Fairley Leadership program via the Ken Sampson Scholarship program with one scholarship recipient participating in the 2023 program.

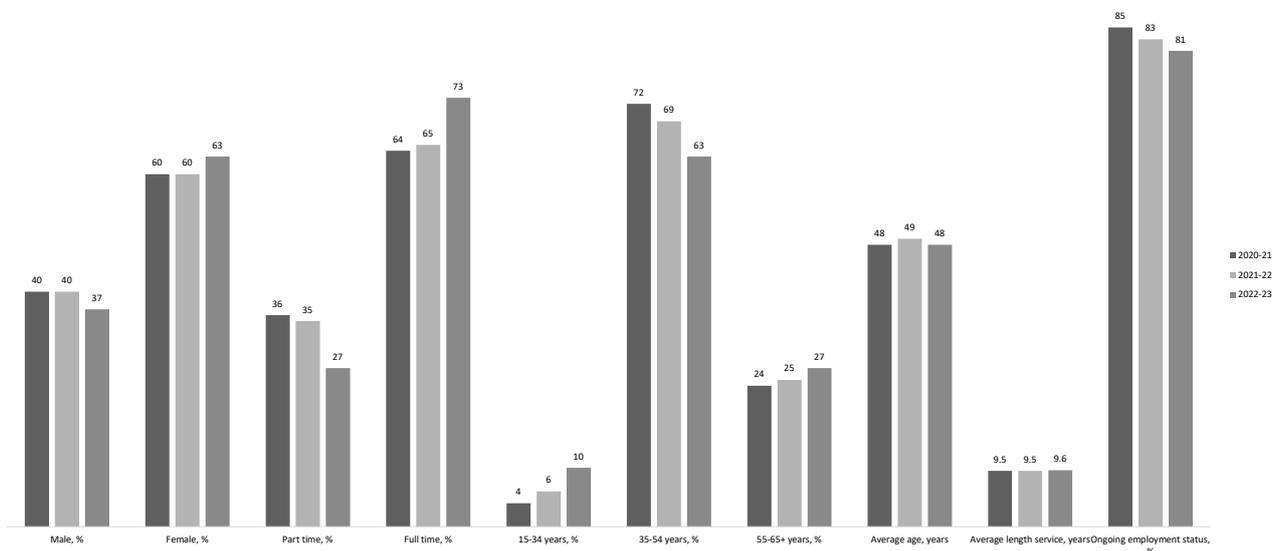
### Diversity and inclusion

The Goulburn Broken CMA Gender Equality Action Plan was approved by the Gender Equity Commissioner in July and 2022-23 was the first year for delivery. Key actions included supporting flexible work options (including when offering acting/higher duties), implementing formal training and awareness programs and supporting programs, training and conferences for skill development in women.

### Our staff

A list of all Goulburn Broken CMA staff employed for all or part of 2022-23 is on page 170.

## Goulburn Broken CMA people profile



## Annualised salary by \$20,000 bands for executives and other senior non-executive staff

Income band (salary) <sup>i</sup>	No. (headcount)
< \$160,000	1
\$160,000 - \$179,999	3
\$180,000 - \$199,999	0
\$200,000 - \$219,999	0
\$220,000 - \$239,999	1

i. Income bands in this table differ from Note 8.4 in the Financial Statements as \$ values are based on salary only, not total remuneration package.

## Other workforce data 2020-21, 2021-22 and 2022-23

	2020-21		2021-22		2022-23		Comments
	no.	%	no.	%	no.	%	
<b>Years of service</b> <sup>i</sup>							
12 months or less	0	0	5	10	12	20	We welcomed 15 new employees in 2022-23 seeing growth with new positions across many program areas.
1-3 years	8	15	4	8	5	8	
3-5 years	5	10	3	5	5	8	
5+ years	40	75	40	77	37	63	
Average length of service, years	9.5		9.5		9.6		
<b>Salary distribution</b> <sup>i&amp;ii</sup>							
<\$40,000	0	0	0	0	0	0	Salary figures continue to increase as a result of EBA increments and new positions in the strategic space.
\$40,000 - 59,999	0	0	0	0	0	0	
\$60,000 - 79,999	13	25	8	16	7	12	
\$80,000 - 99,999	18	34	23	44	28	47	
\$100,000+	22	41	21	40	24	41	
Average Salary <sup>iii</sup>	\$82,247		\$ 90,962		\$107,450		
<b>Qualifications</b> <sup>i</sup>							
Year 12 or less	2	4	1	2	1	2	Qualification levels have remained constant.
Certificate	0	0	0	0	1	2	
Advanced Diploma/Diploma	8	15	8	15	8	14	
Degree	33	62	32	62	37	63	
Postgraduate Degree/Graduate Diploma	10	18	11	21	12	20	
<b>Turnover (total)</b>	1	2	9	17	6	10	Turnover in 2022-23 reduced from the previous year.
<b>Turnover (ongoing staff only, % of total turnover)</b>	0	0	7	78	6	100	
<b>Exit interviews completed</b>	1	100	5	56	2	34	
<b>Absenteeism</b>		1.4		1.7		2.0	
<b>Training expenditure (% of employee related expenditure)</b>	\$91,872	1.5	\$85,764	1.4	\$66,464	1.0	

i. All employees (excluding terminations and Board/committee members).

ii. Based on 1.0 FTE full year salary.

iii. Actual average salary paid including terminations.

## What's next?

### Human resources

- Continued implementation of the *Gender Equality Act 2020*.
- Implementation of the Goulburn Broken CMA Our People - Workforce Strategy 2022-2027.
- Leadership training and development for all people managers

### Occupational Health and Safety

- Preparation and implementation of the updates to Occupational Health & Safety Regulations for psychosocial hazards
- Support the resourcing needs and OHS requirements for new funding areas including Regional Land Partnerships

## Comparative workforce data <sup>i, ii</sup>

The following table discloses the headcount and full-time staff equivalent (FTE) of all active employees of the Goulburn Broken CMA employed at the last full pay period in June of the current reporting period (2023) and in the last full pay period in June of the previous reporting period (2022).

	June 2023						June 2022											
	All employees			Ongoing <sup>iii</sup>			Fixed term <sup>iv</sup> and casual			All employees			Ongoing <sup>iii</sup>			Fixed term <sup>iv</sup> and casual		
	No. (headcount)	FTE		Full time	No. (headcount)	FTE	No. (headcount)	FTE		No. (headcount)	FTE	No. (headcount)	FTE		No. (headcount)	FTE	No. (headcount)	FTE
Demographic data																		
Gender <sup>v</sup>																		
Male	22	21.5	16	1	16.6	5	4.9	21	20.5	14	1	14.6	6	5.9				
Female	37	33.4	18	13	27.9	6	5.5	31	26.9	13	15	24.1	3	2.8				
Age																		
15-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
25-34	6	5.8	3	1	3.8	2	2.0	3	2.6	0	1	0.8	2	1.8				
35-44	13	12.1	9	3	11.1	1	1.0	12	11.0	7	5	11.0	0	0				
45-54	24	21.9	14	6	18.5	4	3.4	24	21.3	14	7	18.4	3	2.9				
55-64	16	15.1	8	4	11.1	4	4	13	12.5	6	3	8.5	4	4.0				
65+	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Classification data <sup>vi</sup>																		
Bands																		
Band 5	2	2.0	2	0	2.0	0	0	3	3.0	2	0	2.0	1	1.0				
Band 6	5	4.4	2	2	3.4	1	1.0	5	4.4	2	3	4.4	0	0				
Band 7	13	12.3	9	3	11.3	1	1.0	10	9.0	7	3	9.0	0	0				
Band 8	20	17.9	11	6	15.5	3	2.4	17	14.7	8	7	13.0	2	1.7				
SEO	14	13.3	10	3	12.3	1	1.0	11	10.3	8	3	10.3	0	0				
Program managers	4	4.0	0	0	0	4	4.0	5	5.0	0	0	0	5	5.0				
PEER	1	1.0	0	0	0	1	1.0	1	1.0	0	0	0	1	1.0				

i. All figures reflect employment levels during the last full pay period in June of each year.

ii. Excluded are external contractors/consultants, and temporary staff employed by employment agencies.

iii. Ongoing employees includes people engaged on an open-ended contract of employment who were active in the last full pay period of June.

iv. Fixed Term employees includes people engaged on a fixed term contract of employment who were active in the last full pay period of June.

v. Non-binary data around gender (self-described) has not yet been collected.

vi. Employees are classified as a Band (1 to SEO) under the EBA. Program managers refers to staff not employed under the EBA.

## 2022-23 Occupational Health and Safety performance

Occupational Health and Safety has continued to focus on the review of incident and hazard data, employee OHS procedures and supporting documentation and review of the risk register to ensure the safety of our employees.

The 2022-23 focus in response to hazard report data and emerging issues has been:

- vehicle safety
- review of safe work instructions and risks for new and existing practises
- psychological safety and wellbeing initiatives.

Wellbeing initiatives offered including:

- flu immunisations, taken up by 58 per cent of employees
- voluntary skin check program
- social engagement activities such as A Taste of Harmony, virtual couch catch up, roll and stroll.

The Key Performance Indicators for OHS at Goulburn Broken CMA continues to be included in the quarterly reporting of OHS to the Board and Senior Management team.

Refer also to the 2022-23 Occupational Health and Safety performance table below.

### Occupational health and safety statistics summary

Measure	KPI	2020-21	2021-22	2022-23
Hazards	Hazards reported, no.	2	7	4
	Rate per 100 FTE	4	15	7
Incidents	Total incidents, no.	6	11	21
	Rate per 100 FTE	12	23	38
	Incidents requiring first aid and/or further medical treatment, no.	0	1	2
Claims	No. of Standard claims	0	0	1
	Rate per 100 FTE	0	0	2
	No. of lost time Standard claims	0	0	1
	Rate per 100 FTE	0	0	2
	No. claims exceeding 13 weeks	0	0	0
	Rate per 100 FTE	0	0	0
Fatalities	Fatality claims	0	0	0
Claim costs	Average cost per Standard claim	0	0	\$3,964
Return to work	Percentage of claims with RTW plan <30 days	n.a.	n.a.	100
Management commitment	Evidence of OHS policy statement, OHS objectives, regular reporting to senior management of OHS, and OHS plans (signed by CEO or equivalent)	Completed	Completed	Completed
	Evidence of OHS criteria(s) in purchasing guidelines (including goods, services and personnel)	Completed	Completed	Completed
Consultation and participation	Evidence of agreed structure of designated workgroups (DWGs), health and safety representatives (HSRs), and issue resolution procedures (IRPs)	Completed	Completed	Completed
	Compliance with agreed structure on DWGs, HSRs, and IRPs.	Completed	Completed	Completed
	Number of OHS Committee meetings	5	5	5
Risk management	Percentage of internal audits/inspections conducted as planned.	75	67	83
	Percentage of reported incidents investigated	100	100	100
	Improvement Notices issued across the Authority by WorkSafe Inspector	0	0	0
	Percentage of issues identified actioned arising from:			
	- internal audits	100	78	100
	- HSR provisional improvement notices (PINs)	n.a.	n.a.	n.a.
- WorkSafe notices	n.a.	n.a.	n.a.	
Training	Percentage of managers and staff that have received OHS training:			
	- induction	100	100	100
	- management training	100	100	100
	- contractors, temps, and visitors	100	100	100
	Percentage of HSRs trained:			
	- acceptance of role	n.a.	n.a.	n.a.
	- re-training (refresher) <sup>i</sup>	20	0	0
- reporting of incidents and injuries	100	100	100	

i. HSR refresher training is not compulsory but supported where HSRs wish to undertake the training.

# Environmental footprint

## Long-term and annual scorecard

2022-23 performance	On target			
Organisation condition <sup>i</sup>	1990	2023	Long-term risk	Long-term strategic implementation
			MEDIUM	Early

i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.

### Major strategic references

Appendix 6 includes a list of relevant state, national and international strategies.

### Background

With support from management and all employees, Goulburn Broken CMA promotes environmentally responsible and sustainable practices.

Data collection for greenhouse gas emissions calculations commenced in 2006-07 and is used as a base year for reporting and comparisons.

Reporting is guided by the Victorian Government's Financial Reporting Directions 24 and in line with current carbon accounting practices.

### Organisation condition

The table on page 94 summarises the greenhouse gas inventory, including direct emission sources such as vehicle fleet fuel and indirect sources such as purchased electricity, business travel and waste.

### Long-term strategy implementation progress

Since the initial data collection in 2006-07, the Authority's overall emissions report shows a downward trend with continued improvements in energy use and vehicle emissions (the Authority's biggest greenhouse gas emissions sources), waste management and paper use.

### 2022-23 performance

During 2022-23, Goulburn Broken CMA Board endorsed a target to be carbon neutral by the end of 2025. Priority actions included the establishment of a contract that purchased 100 per cent renewable electricity which had accounted for approximately one-third of past emissions.

Also, a key principle outlined within the Goulburn Broken CMA carbon neutrality plan is to 'focus beyond own emissions through active regional leadership and support for catchment greenhouse gas mitigation initiatives and projects'. Goulburn Broken CMA (though a statewide initiative) led a project which supported the feasibility of a significant carbon offset project proposed in the Goulburn Broken catchment. The project focused on understanding potential ecological and cultural benefits and opportunities that may arise if the carbon offset development was to occur, and is a crucial aspect for the project proponents.

Total greenhouse gas emissions rose slightly during 2022-23, mainly due to increased air travel. A return to office-based work resulted in increased electricity consumption overall, which was partially offset through the purchase of green power for the Shepparton office. Total emissions for the year were 62 per cent lower than 2006-07 levels. Emissions per FTE also rose slightly from 4.8 t CO<sub>2</sub>-e to 4.9 t CO<sub>2</sub>e but were also 62 per cent lower than the 2006-07 levels. Electricity emissions reduced significantly in 2022-23 and were 77 per cent below 2006-07 levels. There was a rise in consumption for the year due to increased office-based work and additional staff based at the Yea office, however this rise was offset through the purchase of Green Power at the Shepparton office from October. Flexible work arrangements continue to contribute to lower power consumption in all offices through reduced lighting and power requirements. The Shepparton office solar system, installed in 2021, exported a total of 22,794 kWh to the grid during 2022-23.

Vehicle fleet emissions also rose during 2022-23 with increased travel distances compared to the previous year. Total fleet kilometres per year remains less than 2019-20 (pre COVID-19) levels indicating the culture shift in reduced vehicle use has continued. Increased use of technology for virtual meetings where face-to-face meetings are not required and the formal introduction of flexible work arrangements (with many staff working from home up to several days per week) has resulted in less kilometres travelled. The ongoing management decision to preference hybrid/petrol vehicles over diesel vehicles where practical combined with improved fuel efficiency and lower emissions vehicles continued the trend of lower emissions per 1,000 kilometres compared to previous years. Total emissions from vehicles were 54 per cent below 2006-07 levels.

Paper use rose slightly from approximately 2 A4 equivalent reams per FTE to 2.1, which was 85 per cent below the 2006-07 level of 14.2 reams per FTE.

Flight emissions rose but were well below the 2019-20 emissions with a number of conferences and meetings undertaken virtually, reducing the need for air travel.

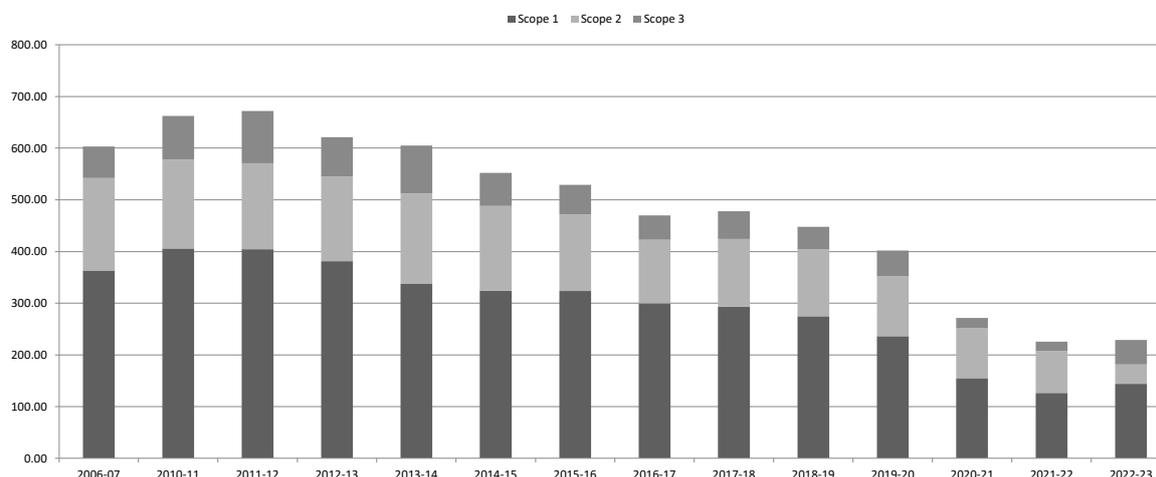
Water and waste do not contribute significantly to Goulburn Broken CMA's environmental footprint. Water use remains consistently low. A waste audit was not undertaken in 2022-23 given the historically low contribution to the Authority's emissions since 2014-15 (less than 0.5 t CO<sub>2</sub>-e). Results of the 2021-22 waste audit were used to estimate emissions for 2022-23.

## Office-based environmental impacts reporting

Sustainability report <sup>i</sup>	2006-07 (base year)		2021-22		2022-23	
	Consumption	GHG emissions (t CO <sub>2</sub> -e)	Consumption	GHG emissions (t CO <sub>2</sub> -e)	Consumption	GHG emissions (t CO <sub>2</sub> -e)
<b>Direct emissions (Scope 1)</b>						
Petrol for vehicles (L)	74,711	171	39,102	91	49,088	113
Diesel for vehicles (L)	66,127	178	13,278	36	1,271	31
LPG for vehicles (L)	8,936	14	-	-	-	-
Distance travelled by fleet vehicles (km)	Not avail.		976,807		1,124,490	
<b>Total Scope 1</b>		<b>363</b>		<b>127</b>		<b>144</b>
<b>Indirect emissions (Scope 2)</b>						
Electricity (kWh)	147,930	179	84,484	81	101,371	86
Electricity offsets - green energy purchased (kWh)					57,116	-48
Solar electricity exported to grid (kWh)					22,794	
<b>Total Scope 2</b>		<b>179</b>		<b>81</b>		<b>38</b>
<b>Optional emissions (Scope 3) <sup>ii</sup></b>						
Electricity (transmission & distribution losses) (kWh)	147,930	22	84,484	8	101,371	7
Flights (km) <sup>iii</sup>	Not avail.	-	6,336	2	30,664	3
Waste - landfill (kg)	8,680	9	336	1	328	0
Water consumption (kL)	Not avail.	-	123	0	123	0
Paper consumption (reams)	514	2	75	0	91	0
Petrol (extraction, production, etc.) (L)	74,711	14	39,102	5	49,088	29
Diesel (extraction, production, etc.) (L)	66,127	13	13,278	2	11,271	8
LPG (extraction, production, etc.) (L)	8,936	1	-	-	-	-
<b>Total Scope 3</b>		<b>61</b>		<b>18</b>		<b>47</b>
<b>Total Scope 1 + 2</b>		<b>542</b>		<b>208</b>		<b>182</b>
<b>Total Scope 1 + 2 + 3</b>		<b>603</b>		<b>226</b>		<b>229</b>
Offsets purchased (% air travel)	Not avail.		15			3

- Except for air travel, emissions (t CO<sub>2</sub>-e) were calculated using the National Greenhouse Accounts factors: 2022 issued by Australian Department of Climate Change, Energy, the Environment and Water.
- Scope 3 emissions are indirect emissions, such as extraction and production of fuels, transport related activities in vehicles not owned or controlled by Goulburn Broken CMA, waste disposal, and electricity-related activities (e.g. transmission and distribution losses) not covered in Scope 2. Reporting of Scope 3 emissions is optional under the international Greenhouse Gas Protocol.
- From 2022-23, commercial air travel emissions were calculated using the International Civil Aviation Organisation Carbon Emissions Calculator.

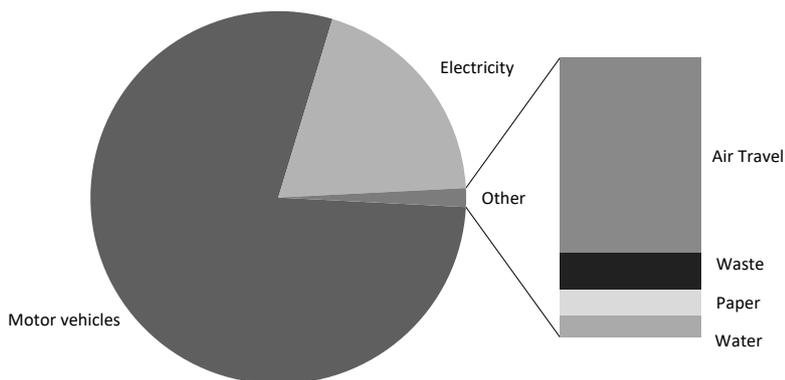
### Goulburn Broken CMA emissions - t CO<sub>2</sub>-e



## Environmental reporting under revised FRD 24

Measure	Indicator	2022-23
Total scope 1 emissions (t CO2-e)	G1	144
Total Scope 2 emissions (t CO2-e)	G2	38
Total Scope 3 emissions (t CO2-e) – air travel and waste only	G3	3
Total electricity consumption (MWh)	EL1	101
On-site electricity generated (MWh) – solar exported to grid	EL2	23
Total electricity offsets (MWh) – green energy purchased	EL4	57
Number of vehicles – includes vehicles changed over - Petrol	T2	35
Number of vehicles – includes vehicles changed over - Diesel	T2	10
Emissions from vehicle fleet (t CO2-e) – scope 1 only	T3	144
Distance travelled by commercial air travel (passenger km)	T4	30,664
Environmentally sustainable design in new buildings	B3	n.a.
Total water consumption (kL)	W1	123
Emissions associated with waste disposal (t CO2-e)	WR5	0.5

### 2022-23 Emissions by source activity



# Governance

Compiled by Eileen Curtis, Shannon Crawford and Michael Carrafa .

## Long-term and annual scorecard

2022-23 performance	On target			
Organisation condition <sup>i</sup>	1990	2023	Long-term risk	Long-term strategic implementation
	n.a.		<b>MEDIUM</b>	Watch & adapt

i. Appendix 1 describes the analytical framework. Ratings legend is inside front cover.

### Government investment <sup>i</sup>, \$'000

2020-21	2021-22	2022-23	2023-24 <sup>ii</sup>
1,488	2,200	2,093	1,788

- i. The approach to calculating Governance was revised in 2020-21 and prior years were recalculated for consistency.
- ii. Budget is based on the Corporate Plan 2023-24.

### Major strategic references

The Goulburn Broken Corporate Plan 2022-23 to 2026-27 outlines the business undertakings and objectives for the relevant four years. It provides a summary of activities to be undertaken over the next 12 months to contribute to the achievement of objectives. Appendix 6 includes a more complete list of legislation and policies that apply.

### Background

This section includes:

- A description of 'Governance'.
- The legislative and funding context of the Goulburn Broken CMA to establish its Corporate Governance practices.
- A scorecard (above) as a summary of annual and long-term performance (including compliance) and the capacity of the Catchment's people to undertake sound and ethical natural resource management.
- An overview of Goulburn Broken CMA's governance practices.
- Goulburn Broken CMA's performance of statutory responsibilities as an employer and a Victorian State Government Authority.
- Performance against key performance indicators listed in Goulburn Broken CMA's Corporate Plan.
- What's next? (strategic priorities over the next 12 months).

### Description of Governance investment area

This enabling program exists to ensure that Goulburn Broken CMA continues to fulfil its statutory and corporate functions; maintains a high level of governance, transparency and accountability in delivering program commitments agreed with investors and ensures that:

- Areas of finance and reporting, business development, communications and marketing, human resources and information and communication technology requirements are clearly aligned with our business objectives.

- A safe workplace is provided for all employees, contractors and visitors.
- An effective risk management framework is in place which forms an integral part of the strategic planning processes, where risks are identified, assessed and monitored under risk treatment plans to mitigate the risk to an agreed level.
- Comprehensive monitoring and evaluation processes are in place ensuring project reporting on expenditure and outputs is of a high level and in line with requirements of the Board and investors.
- Goulburn Broken CMA continues to be an active member of the Regional Investment Coordinators Group which collaborates with the Department of Energy, Environment and Climate Action (DEECA) on reporting processes and systems.
- Optimum information management systems are in place to allow Goulburn Broken CMA to undertake, record, communicate and report on its business activities undertaken throughout the catchment.
- The environmental footprint is minimised.
- Goulburn Broken CMA works in partnership and openly shares knowledge and information with a range of agencies and other Victorian CMAs to improve the delivery of integrated natural resource management.
- An optimum corporate structure commensurate to its program funding acceptable to all stakeholders and the community at large.
- Governance standards are communicated to the community to ensure that Goulburn Broken CMA maintains its social licence to operate.

### 2022-23 performance

The performance of the Governance investment area is described comprehensively through the Business and Financial Report sections.

### What's next?

Key areas of the focus for business improvement in 2023-24 will be:

- Embedding of updated Business Continuity Framework following learnings from 2022-23 flood event.
- Integrate systems and review processes and services to enable a high standard of financial management and governance with focus on integrated financial and output data for analytics and reporting.
- Implementation of reporting against renewed organisational indicators to monitor performance

against business objectives.

- Update of budgeting and forecasting systems to enable responsive and efficient reporting on financial outlook with three year outlook.
- Implement the Goulburn Broken CMA workforce strategy incorporating opportunities from the People Matter Survey with focus on Psychological safety, Employee wellbeing and Leadership training and development for all people managers.
- Continue to implement the Goulburn Broken CMA Flexible Work Framework and *Gender Equality Act* Action Plan.
- Continue to implement Procurement and Contract Management Framework.
- Implementation and training of Information Management Framework.
- Centralisation of capturing of project risks through project management system for ease of review and reporting.

## Goulburn Broken CMA's legislative and funding context

Refer to 'Objectives, functions, powers and duties' below for the legislative context.

The Victorian Government funds Goulburn Broken CMA to fulfil its statutory obligations as detailed in the two relevant Statements of Obligations.

Costs that enable Goulburn Broken CMA to fulfil its core corporate obligations are partly funded from a direct corporate allocation and interest earned. Other corporate costs are charged to projects up to a board-approved percentage which recognise the degree of support provided to those projects.

\$16.8 million of Goulburn Broken CMA's funding was sourced from Regional, Victorian and Australian Governments in 2022-23. It is estimated that the regional community contributes (in-kind and via products and services) at least 1 to 1.5 times the governments' contribution.

All works undertaken are in line with State, Murray-Darling Basin and National strategies.

## Objectives, functions, powers and duties of Goulburn Broken CMA

Goulburn Broken CMA has responsibilities under two Statements of Obligations, one under the *Catchment and Land Protection Act 1994* (for obligations under that Act) and another under the *Water Act 1989* (for obligations under that Act). The statements are available under About Us on the Goulburn Broken CMA website [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

### **Catchment and Land Protection (CaLP) Act 1994**

The responsibilities of Goulburn Broken CMA as they relate to the *CaLP Act 1994* are as follows:

- Prepare, coordinate, monitor and review the Regional Catchment Strategy.
- Prepare and submit an annual report on the condition and management of land and water resources in the region.
- Prepare and submit a corporate plan to the Minister by 30 June each year.

- Comply with the Statement of Obligations.

### **Water Act 1989**

Under the *Water Act 1989*, Goulburn Broken CMA aims to reduce the impact of flood damage to new buildings, help conserve and preserve flora, fauna and habitat in designated waterways and to reduce water quality decline.

This is done by providing:

- Permits to construct and operate works on a waterway, compliance and community education.
- Resources to planning permit referrals for developments within a flood-prone area.
- Responses to applications for flood levels, flood risk reports and flood information before development.
- Flood planning information and advice to councils, state emergency services, developers and others.
- Flood response action plans, including collection of flood information during and after a flood and assistance with emergency planning and flood warning.
- Flood data management.
- Comply with the Statement of Obligations.

## Goulburn Broken CMA's corporate governance practices

Sound and ethical corporate governance practices underpin the Goulburn Broken CMA's overall performance including compliance with what is required and expected of it. This is codified in the Goulburn Broken CMA's Financial Code of Practice which all employees are obligated to comply with.

## Planning Framework

The Goulburn Broken CMA's planning framework is described within the 'Regional Catchment Strategy, resilience and climate change' section on page 29.

## Financial management compliance attestation statement

I, Helen Reynolds, Chair of the board of the Goulburn Broken Catchment Management Authority, on behalf of the Responsible Body, certify that the Goulburn Broken CMA has no Material Compliance Deficiency with respect to the applicable Standing Directions under the *Financial Management Act 1994* and Instructions.



Helen Reynolds

Chair

29 August 2023

## Goulburn Broken CMA Board

Members of the Goulburn Broken CMA Board of Directors are drawn from within the region and together have extensive experience and knowledge of land management, water resources management and the water industry, waterway management, environment or natural resources management, primary industry, strategic or business planning and financial management.

Under the direction of the Board, Goulburn Broken CMA develops detailed environmental management strategies under the umbrella of the overarching Regional Catchment Strategy.



### Helen Reynolds - Chair

Helen has lived and worked in the Goulburn Broken catchment for over 25 years. Over the past 20 years Helen and her partner Craig have built an innovative and productive broadacre irrigated cropping business at Congupna. Prior to that Helen worked in public and not-for-profit sector roles in agriculture, landcare and land management.

Helen holds an Honours degree in Science and is a Member of the Australian Institute of Company Directors.

Helen is passionate about sustainable land and water management and nature conservation.



### Adrian Weston – Deputy Chair

Adrian, who previously ran a dairy farm, owns and operates an irrigated prime lamb and cropping farm enterprise at Rushworth. He is also a Campaspe Shire councillor, representing the Waranga Ward. Adrian has a long-standing interest in natural resource management and believes the greatest challenge facing the catchment community is balancing the demand for the increased productive use of land (soil) and water resources with protecting and improving the condition of the region's unique natural environment.

He says the key to building the Catchment's environmental and social resilience relies on the willingness of business, industry and communities to embrace and adapt to change.



### Ron Harris

Ron is an agricultural scientist who is a farmer at Nagambie, supplying a branded grass fed beef program. He has held executive roles in the Department of Agriculture covering agricultural service delivery, natural resource management, biosecurity and emergency response and recovery. Ron is currently chair of the Victorian Cattle Compensation Advisory Committee which recommends the expenditure of levy funds to the Minister for Agriculture. He is also chair of the Mid Goulburn branch of the Grasslands Society. He has lived in the Goulburn Broken catchment for over 40 years.



### Les McLean

Les is an experienced board director and executive with a strong financial background as CFO with more than 20 years management and leadership experience in the Victorian water industry and health sector. Les holds particular expertise in finance (FCPA), governance (GAICD), strategic planning, risk management and stakeholder engagement.

He was previously a board director of the Port Phillip and Westernport CMA and currently holds the position of Executive Officer of the Natural Resources Conservation League of Victoria and its associated environmental philanthropic trust.



### Amanda McClaren

Amanda is passionate about regional development, community leadership, regenerative agriculture, youth and their education.

Amanda holds an Honours degree in Applied Science and is completing a Masters of Teaching (secondary) with La Trobe University. Amanda is a graduate of the Australian Institute of Company Directors (GAICD) and the Australian Rural Leadership Program LARC Rivers to Plains.

As former chair of Regional Development Australia for the Hume Region and an emeritus mayor of Strathbogie Shire, Amanda values the role of agriculture and natural resource management within our Goulburn Broken Catchment.

Having lived on her farm at Graytown since 2005, Amanda and her husband Ian have built a small-scale poultry business supplying their pasture-raised chickens to discerning customers throughout Melbourne and regional Victoria.



### Sarah Parker

Sarah holds a Masters in Agriculture and Rural Development and a Bachelor of Leisure Management. She is a graduate of the Australian Institute of Company Directors, National Farmers Federation Diversity in Agricultural Leadership Program, and the Victorian Climate Smart Agriculture Fellowship Program. She has experience in executive and management roles in agriculture, extension and research, community development, and education. Sarah has been a partner in an irrigated dairy farm at Undera, in the Goulburn Valley, since 2004.

Sarah holds board and committee positions with Australian Women in Agriculture, National Rural Women's Coalition, Australian Dairy Collective, Victorian Farmers Federation, and National Farmers Federation.

Sarah values a sustainable future for agriculture and the environment and is enthusiastic about the next generation becoming more involved in natural resource management.



### Leanne Miller

Leanne is a Dhulanyagen Ulupna woman of the Yorta Yorta people. She is an experienced director with a history of working in government, non-government and social organisations.

She is skilled in governance and leadership in non-profit organisations, corporate social responsibility, program evaluation, conflict resolution and culture change. Leanne is a Senior Atlantic Fellow for Social Equity and works as Principal Adviser Indigenous Workforce Development at RMIT University. She has extensive experience advocating for and building opportunities with women in business including in environmental management and tourism.

Leanne is chair of the Outback Academy Australia, a Victorian Women's Trust board member, a Victorian Women's Benevolent Trust – Dugdale Trust for Women and Girls trustee, a member of Koorie Women Mean Business.

She was the Inaugural elected North East Member of the First Peoples Assembly of Victoria (2019-2023).



### Jodie Smith

Jodie is a Senior Assessor for CPA Australia and previously worked as an accountant in public practice for the past 16 years. She holds qualifications in economics, accounting, agriculture and animal science, is a Fellow Certified Practising Accountant (FCPA) and is a graduate of the Australian Institute of Company Directors (GAICD).

Jodie maintains an affinity to rural communities, being a board director of Rochester and Elmore District Health Service for the past five years and is a part of an irrigated cropping farm with her partner Nathan, in the Catchment area. Jodie has an interest in how we can better maintain our environment and the role that agriculture plays in ensuring our natural resources are maintained for future generations.

## Board members and meeting attendance 2022-23

Name	Position	Term	Attended	Eligible to attend
Helen Reynolds	Chair	1 July 2022 to 30 June 2023	8	9
Adrian Weston	Deputy chair	1 July 2022 to 30 June 2023	9	9
Ron Harris		1 July 2022 to 30 June 2023	8	9
Sarah Parker		1 July 2022 to 30 June 2023	8	9
Leanne Miller		1 July 2022 to 30 June 2023	7	9
Les McLean		1 July 2022 to 30 June 2023	9	9
Amanda McClaren		1 July 2022 to 30 June 2023	8	9
Jodie Smith		1 July 2022 to 30 June 2023	8	9

## Board Committees

Goulburn Broken CMA has established an Audit Risk and Compliance Committee and a Remuneration Committee. Both committees operate under the terms of their respective Charter.

### Audit, Risk and Compliance Committee

The members of the Audit, Risk and Compliance Committee in 2022-23 are detailed in the table below.

The responsibilities of the Audit, Risk and Compliance Committee are set out in Standing Direction 3.2.1.1.

Key responsibilities of the Audit, Risk and Compliance Committee are to:

- Review and report independently to the Board on the annual report and all other financial information published by Goulburn Broken CMA.
- Assist the Board in reviewing the effectiveness of Goulburn Broken CMA's internal control environment covering:
  - effectiveness and efficiency of operations
  - reliability of financial reporting
  - compliance with applicable laws and regulations.
- Determine the scope of the internal audit function and ensure its resources are adequate and used effectively, including coordination with the external auditors.
- Maintain effective communication with external auditors.
- Consider recommendations made by internal and external auditors and review the implementation of actions to resolve issues raised.
- Oversee the effective operation of the risk management framework.

Members are appointed by the Board, usually for a three-year term, and are subject to the committee's Terms of Reference.

Meetings are held quarterly and at any other time on request of a committee member or the internal or external auditor.

In 2022-23, the Committee met five times. Attendance of committee members is detailed in the table below.

### Audit, Risk and Compliance Committee membership and meeting attendance 2022-23

Name	Position	Term	Attended	Eligible to attend
Adrian Weston	Chair, Independent	1 July 2022 to 30 June 2023	5	5
Helen Reynolds (ex officio)	Independent	1 July 2022 to 30 June 2023	3	5
Les McLean	Independent	1 July 2022 to 30 June 2023	5	5
Jodie Smith	Independent	1 July 2022 to 30 June 2023	4	5
Kerrie Howard	Independent external appointee	1 July 2022 to 30 June 2023	4	5

### Remuneration Committee

To assist the Board, the Remuneration Committee oversees the implementation of the Victorian Government's Remuneration Policy as it applies to the Goulburn Broken CMA CEO and any roles with a significant management responsibility.

The members of the Remuneration Committee in 2022-23 are listed in the table below

### Remuneration Committee membership and meeting attendance 2022-23

Name	Position	Term	Attended	Eligible to attend
Ron Harris	Chair	1 July 2022 to 30 June 2023	2	3
Helen Reynolds (ex officio )		1 July 2022 to 30 June 2023	3	3
Leanne Miller		1 July 2022 to 30 June 2023	3	3
Amanda McClaren		1 July 2022 to 30 June 2023	3	3
Sarah Parker		1 July 2022 to 30 June 2023	3	3

## Performance indicators

Performance area	Performance target	2022-23
<b>Business management and governance</b>	Submit annually, a Board performance assessment report according to any guidelines issues.	Report submitted and complied with guidelines issued.
	A risk management framework in place and approved by the Board.	Risk Register is reviewed by the Board at each Board meeting. Risk Management Policy is reviewed and approved by the Board annually.
	One hundred per cent of the CMA's policies and procedures reviewed every three financial years. Full compliance with all applicable Standing Directions under the Financial Management Compliance Framework Checklist.	85 per cent of policies and procedures updated within the three year target. No material non-compliance with Standing Directions.
	Submit annually, a Board performance assessment report according to any guidelines issues.	Full compliance was achieved
<b>Regional planning and coordination</b>	A Regional Catchment Strategy (RCS) approved by the Minister.	Goulburn Broken Regional Catchment Strategy was approved by the Minister in 2022.
	A stakeholder and community engagement framework / plan approved by the Board.	The Goulburn Broken CMA - Communication, Community Engagement and Partnership Strategy 2022-27 was approved by the Board. The Strategy is currently being implemented.
	A regional Landcare support plan approved by the Board.	Goulburn Broken Community NRM Action Plan 2020-2025 was approved by the Board and is being implemented.
	A regional waterways strategy approved by the minister.	Goulburn Broken Waterway Strategy 2014-2022 was completed and endorsed by the Minister in November 2014 and is being implemented. A review of the Waterway strategy is due to begin in 2024.
	A regional floodplain strategy approved by the Board.	Goulburn Broken Regional Floodplain Management Strategy 2018-2028 was completed and endorsed by the board in December 2017 and is being implemented.
	Land and water management plans (LWMP) in designated irrigation areas (or equivalent) approved by the Board.	The SIR LWMP 2016 Review was completed and approved by the board in August 2016. A review was completed in 2022 and renewal of the plan is currently underway.
	The regional contribution to the annual report on salinity management activities and the allocation and update of salt disposal entitlements is submitted to the Department by 31 July or as otherwise directed by the Department.	The relevant information was provided to the State's reporting annually as part of the Goulburn Broken CMA input into the Salinity Management program. The impact of the irrigated region on salinity in the Murray is well within the limits allocated.

## Performance indicators (continued)

Performance area	Performance target	2022-23
Regional delivery	Progress with implementation of the RCS (and its major sub-strategies) is reviewed by the board annually.	An Implementation Plan for the RCS was endorsed by the Goulburn Broken CMA Board. The Board receives monthly updates on the progress of RCS delivery.
	Projects / activities to implement the RCS are delivered and reported according to associated funding agreements.	Planned projects for 2022-23 that were financially supported under funding agreements were delivered and reported accordingly. It should be noted that the Floodplain Management Strategy is being renewed in 2023 and the Regional Waterways Strategy will begin renewal in 2024
	Project activities to implement the regional waterways strategy and the regional floodplain management strategy delivered and reported according to associated funding agreements.	Planned projects for 2022-23 were delivered and reported according to associated funding agreements.
	Projects / activities to implement the LWMP are delivered and reported according to associated funding agreements.	Planned projects for 2022-23 were delivered and reported according to associated funding agreements.

## Strategic organisational measures

Performance area	Performance indicators	Targets	2022-23
NRM Results (Leadership and Strategy)	Priority actions completed to commence the implementation of the renewed RCS.	RCS Coordination Plan.	Completed February 2022.
		RCS Monitoring, Evaluation, Review and Learning Plan developed.	Completed August 2022.
		Partnership Agreement 2023-2027.	Completed June 2023.
		RCS Seed Funding Grants.	Six applicants were successful in obtaining funding through the Goulburn Broken CMA RCS Seed Funding Grants Program.
		Goulburn Broken CMA Communication, Community Engagement and Participation Strategy developed .	Completed October 2022.
Client and Stakeholder Focus	Clients and stakeholders value the services received from Goulburn Broken CMA and see the services making a positive contribution to catchment condition.	To be reviewed as part of the Engagement Strategy renewal.	The Communication, Community Engagement and Partnership Strategy was developed in 2022-23.  Actions within the Annual Implementation Plan are currently being implemented to support and guide Goulburn Broken CMA's communications, engagement and partnerships within the catchment.
Service Delivery	Projects delivered as adaptively planned, aligned to Goulburn Broken CMA strategy, on budget and to an agreed quality.	95% of investor contracted projects are delivered as agreed.	All Goulburn Broken CMA projects delivered as agreed with investors.

## Strategic organisational measures (continued)

Performance area	Performance indicators	Targets	2022-23
<b>Financial Sustainability</b>	Goulburn Broken CMA pursues funding avenues to diversify revenue streams where they align with the Regional Catchment Strategy and the CMA's legislative obligations.	Total revenue within 10% variance of Corporate Plan.	Total actual revenue was 123% of the Corporate Plan.
<b>Our People</b>	Goulburn Broken CMA has capable and motivated people to enable it to deliver on the RCS and who are able to support the achievement of the Authority's vision and purpose.	Staff turnover rate between 10%-15% .	Turnover for the year was 10%.
		Overall job satisfaction (% of staff satisfied to very satisfied in their job) 70%-80%.	In the 2022 People Matters survey, 60% responded satisfied to very satisfied with a further 26% responding 'neutral'.
		OHS Incidents - 0 notifiable incidents per year.	Nil notifiable incidents.
<b>Governance</b>	Compliance with applicable Standing Directions under the Financial Management Compliance Framework Checklist.	No material compliance deficiencies.	Nil material compliance deficiencies.
	Audit recommendations.	No High risk recommendations vs all recommendations as aligned to the risk appetite.	Nil High risk recommendations.

## Compliance

The following table includes several summaries of Goulburn Broken CMA's compliance that are discussed in more detail elsewhere in this Annual Report.

### Goulburn Broken CMA's performance of statutory responsibilities as a Victorian State Authority and Employer

Act or policy	Board's major tasks	2022-23 issues and status
<i>Catchment and Land Protection Act 1994</i>	Prepare, coordinate, monitor and review of Regional Catchment Strategy.	Regional Catchment Strategy for 2021-27 was approved on 15 April 2022.
	Submit to Minister and Council by the prescribed date: 'A report on the condition and management of land and water resources in the region and carrying out of its functions.'	2021-22 Annual Report submitted on time and 2022-23 on schedule.
	Corporate Plan to be submitted to the Minister under the <i>Catchment and Land Protection Act 1994</i> by 30 June annually.	Submitted to Minister on 30 June 2023.
	Members declare new interests at each (monthly) board meeting and document it in Pecuniary Interests Register. Members must submit a primary return and an annual return.	Declarations of Pecuniary Interests have been duly completed by relevant directors and officers of the Goulburn Broken CMA and are available for inspection.
<i>Water Act 1989</i>	Corporate Plan available for inspection.	The Corporate Plan is available on the Goulburn Broken CMA public website <a href="http://www.gbcma.vic.gov.au">www.gbcma.vic.gov.au</a>
	Meeting Procedures of Authorities.	Minutes are available through application under Freedom of Information. Goulburn Broken CMA has adopted Governance Guidelines for Statutory Authority Board Members, DEECA model policies and Code of conduct for public sector employees
	Waterway management responsibilities.	All works have a process which assesses the works against this Act. Goulburn Broken CMA and its partners have complied with all requirements.
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	Provide for the protection of the environment and promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources and promote the conservation of biodiversity.	All works have a process which assesses the works against this Act. Goulburn Broken CMA and its partners have complied with all requirements.
<i>Financial Management Act 1994</i>	Undertake review of its annual operations and advise the Minister regarding compliance with Financial Management Compliance Framework.	Information listed under FRD 22 is available under the <i>Freedom of Information Act 1982</i> . See page 97 for Statement regarding level of compliance with Standing Direction.
<i>Environmental Protection Act 2017</i>	Ensure activities carried out by Goulburn Broken CMA meet the expectations of the General Environmental Duty, including pro-actively minimising harm to human health and the environment from business activities, as well as complying with laws to manage waste and pollution.	Goulburn Broken CMA will revise and update the Environmental Policy to align with expectations under the Act, and review activities to ensure expectations are being met.
<i>Public Interest Disclosures Act 2012</i>	Report actions in Annual Report. Report actions at each (monthly) Board meeting.	Disclosures of improper conduct by the Goulburn Broken CMA or its employees may be made to IBAC. (See page 109 for information). There were nil reported during 2022-23.

Act or policy	Board's major tasks	2022-23 issues and status
<p><i>Freedom of Information Act 1982</i></p>	<p>Report requests for access to documents in Annual Report. Report requests at each (monthly) board meeting.</p> <p>The <i>Freedom of Information Act 1982</i> (the Act) allows the public a right of access to documents held by the Goulburn Broken CMA (the Authority).</p> <p>The purpose of the Act is to extend as far as possible the right of the community to access information held by government departments, local councils, Ministers and other bodies subject to the Act.</p> <p>An applicant has a right to apply for access to documents held by the Authority. This comprises documents both created by the Authority or supplied to the Authority by an external organisation or individual, and may also include maps, films, microfiche, photographs, computer printouts, computer discs, tape recordings and videotapes. Information about the type of material produced by the Authority is available on the Authority's website under its Part II Information Statement.</p> <p>The Act allows an Authority to refuse access, either fully or partially, to certain documents or information. Examples of documents that may not be accessed include cabinet documents; some internal working documents; law enforcement documents; documents covered by legal professional privilege, such as legal advice; personal information about other people; and information provided to an Authority in-confidence and information that is confidential under another Act.</p> <p>Under the Act, the FOI processing time for requests received is 30 days. However, when external consultation is required under ss29, 29A, 31, 31A, 33, 34 or 35, the processing time is 45 days. Processing time may also be extended by periods of 30 days, in consultation with the applicant. With the applicant's agreement this may occur any number of times. However, obtaining an applicant's agreement for an extension cannot occur after the expiry of the timeframe for deciding a request.</p> <p>If an applicant is not satisfied by a decision made by the Authority, under section 49A of the Act, they have the right to seek a review by the Office of the Victorian Information Commissioner (OVIC) within 28 days of receiving a decision letter.</p>	<p><b>Making a request:</b></p> <p>FOI requests can be lodged online at <a href="http://ovic.vic.gov.au">ovic.vic.gov.au</a>. An application fee of \$31.80 applies. Access charges may also be payable if the document pool is large and the search for material time consuming.</p> <p>Access to documents can also be lodged through a written request to the Goulburn Broken CMA's Freedom of Information officer, as detailed in s17 of the Act.</p> <p>When making an FOI request, applicants should ensure requests are in writing, and clearly identify what types of material/documents are being sought.</p> <p>Requests can be emailed to <a href="mailto:foi@gbcma.vic.gov.au">foi@gbcma.vic.gov.au</a> or mailed to:</p> <p>Freedom of Information Officer PO Box 1752, Shepparton, Vic 3632.</p> <hr/> <p><b>FOI statistics/timeliness:</b></p> <p>During 2022-23, the Authority received one application from the general public.</p> <p>The Authority made nil FOI decisions during the 12 months ended 30 June 2023.</p> <p>There were nil decisions made within the statutory time periods. Of the decisions made outside time, nil were made within a further 45 days and nil decisions were made in greater than 45 days. Nil FOI access decisions were made where access to documents was granted in full, granted in part or denied in full. Nil decisions were made after mandatory extensions had been applied or extensions were agreed upon by the applicant. Of requests finalised, the average number of days over / under the statutory time (including extended timeframes) to decide the request was nil days.</p> <p>During 2022-23, nil requests were subject to a complaint/internal review by OVIC. Nil requests progressed to the Victorian Civil and Administrative Tribunal (VCAT).</p> <hr/> <p><b>Further information</b></p> <p>Further information regarding the operation and scope of FOI can be obtained from the Act; regulations made under the Act; and <a href="http://www.ovic.vic.gov.au">www.ovic.vic.gov.au</a></p>
<p><i>Flora and Fauna Guarantee Act 1988</i></p>	<p>Conserve the Catchment's communities of flora and fauna and manage potentially threatening processes and educate the community in the conservation of flora and fauna.</p>	<p>Goulburn Broken CMA continues to support the implementation of action statements and recovery plans for threatened flora and fauna by DEECA.</p>

Act or policy	Board's major tasks	2022-23 issues and status
<i>Country Fire Authority Act 1958</i>	Work with other related organisations to assist in the control, prevention and suppression of fires within the Catchment.	Goulburn Broken CMA has policies relating to waterway operations that comply with the Act and reduce fire risk.
<i>Public Administration Act 2004</i>	Ensure operations of Board comply with Part 5.	<p>Policy and Procedures ensure that obligations and best practice approaches are built into current operations and practices.</p> <p>Goulburn Broken CMA is committed to applying merit and equity principles when appointing staff.</p> <p>The selection processes ensure that applicants are assessed and evaluated fairly and equitably on the basis of the key selection criteria and other accountabilities without discrimination.</p>
<i>Privacy and Data Protection Act 2014</i>	Ensure details of individuals are protected.	Goulburn Broken CMA Privacy Policy outlines how personal information is stored and under what circumstances it can be accessed or released to third parties in accordance with the Act. Requests for access to personal information can be made under the provisions of the <i>Freedom of Information Act 1982</i> .
<i>Forest Act 1958</i>	Liaise with the Department of Energy, Environment and Climate Action as required.	For waterways in areas managed by DEECA under the Act, the Goulburn Broken CMA complied with elements of the code which deals with access to waterways and crossings.
<i>Building Act 1993</i>	Comply with standards for the construction and maintenance of buildings.	Goulburn Broken CMA does not own or control any government buildings and consequently is exempt from notifying its compliance with the building and maintenance provisions of the <i>Building Act 1993</i> .
<i>Aboriginal Heritage Act 2006</i>	Ensure the use of cultural heritage management plans for certain development plans or activities and interact with registered Aboriginal parties to evaluate management plans, advise on permit applications and enter into cultural heritage agreements.	<p>Goulburn Broken CMA applies diligence with regard to the requirements of the Act and encourages best practice in partner organisations through its cultural heritage support program.</p> <p>Goulburn Broken CMA is committed to policies, programs and strategies aimed at delivering culturally appropriate services to all Victorians.</p> <p>Current practices of inclusive and thorough public consultation ensure that all persons who have an interest in investigations are kept informed and have the opportunity to provide input into Goulburn Broken CMA deliberations.</p>
<i>Fair Work (Registered Organisations) Act 2009</i>	Comply with the Award system which provides a minimum set of terms and conditions for Goulburn Broken CMA employees.	Goulburn Broken CMA's policies have been evaluated for alignment against the Act and are available to staff on its portal (intranet). The enterprise agreement was finalised in 2020.
<i>Equal Opportunity Act 2010</i>	Annual data return reporting gender, diversity and complaints lodged and investigated.	<p>Goulburn Broken CMA is an equal opportunity employer.</p> <p>In 2017 the first Diversity &amp; Inclusion Action Plan was developed for the Goulburn Broken CMA. Diversity and inclusion actions are now incorporated in 'Our People – Workforce Strategy 2022 – 2027'</p> <p>People, Safety and Wellbeing Manager is the contact for any complaints. Nil complaints were received in the reporting period.</p> <p>Of the Goulburn Broken CMA staff, 63 per cent are female and 37 per cent male (see page 91).</p> <p>Of the Goulburn Broken CMA Board members, as at 30 June 2023, 62 per cent are female and 38 per cent male (see page 98).</p>

Act or policy	Board's major tasks	2022-23 issues and status
<i>Charter of Human Rights and Responsibilities Act 2006</i>	Requires public authorities to act consistently with Charter rights when making decisions, developing policies and providing services.	Goulburn Broken CMA continues to provide information regarding rights and responsibilities to all new staff as part of the induction process.
<i>Statutory Referral and Advice (Planning and Environment) Act 1987, Subdivision Act 1988, Building Regulations 2018, Water Act 1989, Mineral Resources (Sustainable Development) Act 1990</i>	<p>Goulburn Broken CMA has delegated floodplain management functions and is the floodplain management authority under the <i>Planning and Environment Act 1987, Subdivision Act 1988</i> and Building Regulations where various types of application for use and development are referred. Furthermore, functions require direct advice to be provided to any body or person under the <i>Water Act 1989</i>.</p> <p>Goulburn Broken CMA is a referral authority for applications from Department of Jobs, Skills, Industry and Regions (<i>Mineral Resource Act, 1990</i>) for work plans on floodplain areas.</p> <p>Goulburn Broken CMA is referral authority from regional water authorities under section 67 licences for dams on waterways and for permits/licences to landowners to carry out works or activities on waterways.</p>	<p>Goulburn Broken CMA processed 1374 referral and advice applications relating to floodplain management and 74 applications for works on waterways for 2022-23.</p> <p><b>Statutory functions under Part 10 of the Water Act:</b> <i>Target: Ninety per cent of statutory requirements (permits, referrals, advice and licenses) associated with waterway and floodplain management are responded to within the prescribed period.)</i></p> <p>In 2022-23, 95 per cent of responses were within the prescribed period.</p> <p><b>Statutory functions under Part 11 of the Water Act:</b> <i>Target: Ninety per cent of statutory requirements (permits, referrals, advice and licences) associated with irrigation management are responded to within the prescribed period.</i></p> <p>In 2022-23, 100 per cent of responses were within the prescribed period .</p>
<i>Local Jobs First Act 2003</i>	<p>Board is advised of application refusals at each (monthly) meeting.</p> <p>Local government can request advice but are not required to implement it.</p>	<p>Decisions are made in accordance with the Victorian Floodplain Management Strategy, the Goulburn Broken Regional Floodplain Management Strategy, the Victoria Planning Provisions Practice Notes and Authority Policy, all of which have largely been incorporated into respective municipal planning schemes as performance based criteria.</p> <p>Advice has been provided where appropriate.</p>
Government Advertising Expenditure	Relates to the disclosure of government advertising expenditure under FRD 221	Nil issues to report.
DataVic Access Policy (2012)	The DataVic Access Policy provides direction on the release, licensing and management of Victorian Government data so that it can be used and reused by the community and businesses.	Goulburn Broken CMA did not supply any data sets to DataVic during 2022-23.
<i>Victorian Government Risk Management Framework</i>  <i>Victorian Managed Insurance Authority Act 1996</i>	<p>The Victorian Government Risk Management Framework provides for a minimum risk management standard across Public Sector entities.</p> <p>Attestation by accountable officer in annual report which ensures that requirement is built into corporate planning and reporting processes.</p>	<p>See page 97 for Statement regarding Goulburn Broken CMA compliance with the applicable Standing Directions under the <i>Financial Management Act 1994</i>.</p> <p>All Insurances for Goulburn Broken CMA are held with the Victorian Managed Insurance Authority and in accordance with the mandatory insurance requirements under the Victorian Government's Risk Management Framework.</p>

Act or policy	Board's major tasks	2022-23 issues and status
Competitive Neutrality Policy	Competitive neutrality requires government businesses to ensure where services compete, or potentially compete with the private sector, any advantage arising solely from their government ownership be removed if it is not in the public interest. Government businesses are required to cost and price these services as if they were privately owned. Competitive neutrality policy supports fair completion between public and private businesses and provides government businesses with a tool to enhance decisions on resource allocation. This policy does not override other policy objectives of government and focuses on efficiency in the provision of service.	Goulburn Broken CMA continues to comply with the requirements of the Competitive Neutrality Policy.
<i>Occupational Health and Safety Act 2004</i>	Report Occupational Health and Safety (OHS) issues at each (monthly) board meeting and in Annual Report. Quarterly report of measurable OHS targets to the Audit Risk and Compliance Committee.	Goulburn Broken CMA continues to review and update its OHS Policy Statement and supporting OHS procedures to provide and maintain a safe work environment for employees as per section 21 of the <i>Occupational Health and Safety Act 2004</i> . All staff are inducted in the procedures that reflect their work function. Employee Health and Safety Representatives and Designated Work Groups are part of the consultative processes under sections 35 and 36 of the <i>Occupational Health and Safety Act 2004</i> . Policies and procedures are available to staff on the portal (intranet). An OHS Report against agreed KPIs is provided to the Board quarterly with detailed review of incidents and action reviewed annually by the Audit Risk and Compliance Committee.
Gifts, benefits and hospitality policy framework	The Victorian Government Framework requiring employees to record gifts, benefits and hospitalities offered to them in their capacity with Goulburn Broken CMA.	Goulburn Broken CMA has a comprehensive policy in relation to this issue and all staff are required to comply and record any benefits on the Register. The annual register is deidentified and publicised on the Goulburn Broken CMA website.
<i>Gender Equality Act 2020</i>	Victorian public sector organisations, universities and local councils (with 50 or more employees) have obligations to plan, measure and track progress towards gender equality.	Goulburn Broken CMA has completed all requirements to ensure compliance with its obligations under the Act with the Commissioner formally approving the Goulburn Broken CMA Gender Equality Action Plan.

## Statement of availability of other information

Goulburn Broken CMA's Annual Reports and Corporate Plans are available on the website [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

### Additional information available on request

In compliance with the requirements of the Standing Directions 2018 under the *Financial Management Act 1994*, details in respect of the items listed below have been retained by the Authority and are available on request, subject to the provisions of the *Freedom of Information Act 1982*:

- details of publications produced by the entity about itself and how these can be obtained
- details of changes in prices, fees, charges, rates and levies charged by the entity
- details of any major external reviews carried out on the entity
- details of major research and development activities undertaken by the entity
- details of major promotional, public relations and marketing activities undertaken by the entity to develop community awareness of the entity and its services.

The information is available on request from:

FOI Officer, Goulburn Broken CMA, PO Box 1752, Shepparton VIC 3630  
Email [foi@gbcma.vic.gov.au](mailto:foi@gbcma.vic.gov.au) or phone (03) 5822 7700.

### Additional information included in annual report

Details in respect of the following items have been included in Goulburn Broken CMA's annual report, on the pages indicated below:

- assessments and measures undertaken to improve the occupational health and safety of employees (on page 92)
- a list of Goulburn Broken CMA's major committees; the purposes of each committee; and the extent to which the purposes have been achieved (on page 100)
- a statement of completion of declarations of pecuniary interests by relevant officers (on page 104).

### Information that is not applicable to Goulburn Broken CMA

The following information is not relevant to Goulburn Broken CMA for the reasons set out below:

- a declaration of shares held by senior officers (no shares have ever been issued in Goulburn Broken CMA)
- a statement on industrial relations within Goulburn Broken CMA and details of time lost through industrial accidents and disputes (no industrial relations issues occurred during 2022-23).

## Compliance with *Public Interest Disclosures Act 2012*

The *Public Interest Disclosures Act 2012* enables people to make a disclosure about corrupt or improper conduct by a public officer or a public body.

Goulburn Broken Catchment Management Authority is a 'public body' for the purposes of the Act.

### **What is a public interest disclosure?**

A public interest disclosure is a complaint of corrupt or improper conduct or detrimental action by a public officer or a public body.

'Improper or corrupt conduct' involves substantial mismanagement of public resources, risk to public health or safety or the environment, or corruption.

'Detrimental action' is action taken against a person in reprisal for making a public interest disclosure.

### **How do I make a 'Public Interest Disclosure'?**

You can make a public interest disclosure about the Goulburn Broken Catchment Management Authority or its board members, officers or employees by contacting the Independent Broad-Based Anti-Corruption Commission (details below).

Goulburn Broken Catchment Management Authority is not able to receive public interest disclosures.

### **How can I access the Goulburn Broken Catchment Management Authority's procedures for the protection of persons from detrimental action?**

Goulburn Broken Catchment Management Authority has established procedures for the protection of persons from detrimental action in reprisal for making a protected disclosure about Goulburn Broken Catchment Management Authority or its employees. You can access Goulburn Broken Catchment Management Authority's Protected Interest Disclosure policy on its website at: [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

### **Contacts**

Independent Broad-Based Anti-Corruption Commission (IBAC) Victoria  
Address: Level 1, North Tower, 459 Collins Street, Melbourne Victoria 3000.  
Mail: IBAC, GPO Box 24234, Melbourne Victoria 3001.  
Internet: [www.ibac.vic.gov.au](http://www.ibac.vic.gov.au)  
Phone: 1300 735 135  
Email: see the website above for the secure email disclosure process, which also provides for anonymous disclosures.

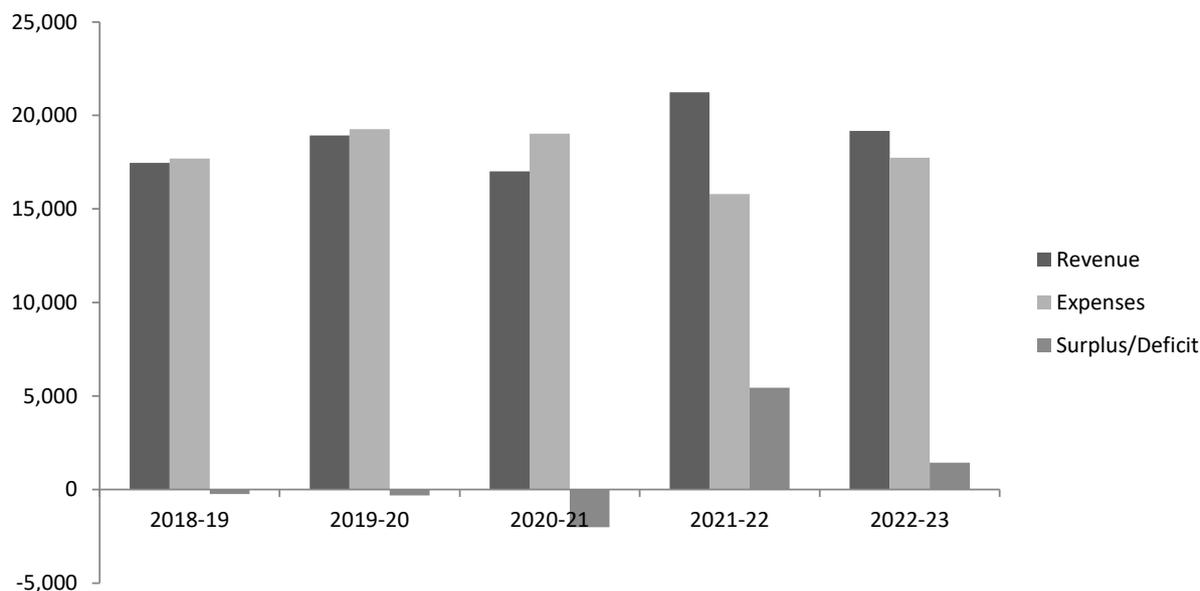
## Financial results summary: current plus past four years

	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Revenue and expenditure</b>					
State Government	12,117	13,639	12,020	15,673	13,840
Australian Government	2,499	2,694	3,002	3,282	2,970
Government contributions	14,616	16,333	15,022	18,955	16,810
Revenue from government entities	1,739	869	615	687	767
Other revenues	1,109	1,740	1,371	1,603	1,595
<b>Total Revenue</b>	<b>17,464</b>	<b>18,941</b>	<b>17,008</b>	<b>21,245</b>	<b>19,172</b>
<b>Programs Expenditure</b>	<b>17,698</b>	<b>19,197</b>	<b>18,965</b>	<b>15,767</b>	<b>17,700</b>
Interest	-	62	59	43	37
<b>Total expenses</b>	<b>17,698</b>	<b>19,259</b>	<b>19,024</b>	<b>15,810</b>	<b>17,737</b>
<b>NET RESULT<sup>i</sup></b>	<b>(234)</b>	<b>(318)</b>	<b>(2,016)</b>	<b>5,435</b>	<b>1,435</b>
<b>Balance sheet items</b>					
<b>Current assets</b>					
Cash	13,808	13,404	11,977	17,166	17,093
Receivables	2,042	1,475	1,480	1,296	1,587
Prepayments	187	154	155	208	276
<b>Total current assets</b>	<b>16,037</b>	<b>15,033</b>	<b>13,612</b>	<b>18,670</b>	<b>18,956</b>
Non-Financial assets	1,154	2,451	2,433	1,922	1,618
<b>Total assets</b>	<b>17,191</b>	<b>17,484</b>	<b>16,045</b>	<b>20,592</b>	<b>20,574</b>
<b>Current liabilities</b>					
Trade creditors	1,390	817	2,512	1,339	835
Unearned revenue/Contract Liabilities	1,176	1,221	-	85	106
Borrowings	103	675	805	808	1,000
Accruals	663	333	301	721	282
Provisions	2,000	1,907	2,027	2,029	1,783
<b>Total current liabilities</b>	<b>5,332</b>	<b>4,953</b>	<b>5,645</b>	<b>4,982</b>	<b>4,006</b>
<b>Non-current liabilities</b>					
Borrowings	418	1,388	1,259	1,049	523
Other	13	33	47	32	81
<b>Total non-current liabilities</b>	<b>431</b>	<b>1,421</b>	<b>1,306</b>	<b>1,081</b>	<b>604</b>
<b>NET ASSETS</b>	<b>11,428</b>	<b>11,110</b>	<b>9,094</b>	<b>14,529</b>	<b>15,964</b>
<b>Equity items</b>					
Contributed capital	4,209	4,209	4,209	4,209	4,209
Reserves	7,219	6,901	4,885	10,320	11,755
<b>TOTAL EQUITY</b>	<b>11,428</b>	<b>11,110</b>	<b>9,094</b>	<b>14,529</b>	<b>15,964</b>
<b>Cash flow items</b>					
Net operating activities	(949)	(180)	(927)	5,241	343
Net investing activities	98	75	81	359	47
Net financing activities	(33)	(299)	(581)	(411)	(463)
<b>Net cash movement</b>	<b>(884)</b>	<b>(404)</b>	<b>(1,427)</b>	<b>5,189</b>	<b>(73)</b>

i. Net Surplus funds relate to committed funds for multi year projects. For further details see the Notes to the Financial Statements, Note 6.3 (page 139).

## Financial results summary: current plus past four years (Cont'd)

Financial summary 2018-19 to 2022-23, \$'000



## Financial results for 2022-23 against Corporate Plan

	Corporate Plan 2022-23 \$'000	Actual 2022-23 \$'000	Actual Variance to Corporate Plan \$'000
<b>Comprehensive Operating Statement</b>			
Total revenue	15,562	19,172	3,610
Total expenditure	(18,964)	(17,737)	1,227
Net result <sup>i</sup>	(3,402)	1,435	4,837
<b>Statement of financial position</b>			
Cash and receivables	15,031	18,679	3,648
Other	150	277	127
Non-current assets	1,910	1,618	(292)
<b>Total assets</b>	<b>17,091</b>	<b>20,574</b>	<b>3,483</b>
<b>Liabilities</b>			
Payables	2,000	1,117	883
Employee provisions	2,266	1,864	402
Lease Liabilities	1,764	1,523	241
Contract Liabilities	-	106	(106)
<b>Total liabilities</b>	<b>6,030</b>	<b>4,610</b>	<b>1,420</b>
<b>Net assets</b>	<b>11,061</b>	<b>15,964</b>	<b>4,903</b>

i. Net Surplus funds relate to committed funds for multi year projects. For further details see the Notes to the Financial Statements, Note 6.3 (page 139).

## Financial Review including significant changes and factors affecting performance and position

The variance in the actual result to end June 2023 of \$1.4 million surplus compared to the Corporate Plan deficit of \$3.4 million was driven by an increase of revenue for new projects of \$3.6 million above Corporate Plan.

The increase in revenue was predominantly received from the Department of Energy, Environment and Climate Action which accounted for \$3.5 million of the additional revenue. Additional revenue included new projects relating to Flood Recovery (\$2.7 million) and revenue received in June for programs to be delivered in 2023-24 including Victorian Landcare Grants and Coordination (\$0.4 million), Corporate Administration (\$0.3m) and Environmental Contribution funds for sustainable irrigation drainage projects (\$0.2 million).

Wet weather and floods in the first half of the fiscal year impacted onground works, thus expenditure was below Corporate Plan in the current fiscal year which also impacted the high net surplus result with delivery for these projects carried forward into the 2023-24 fiscal year.

With project delays and some of the new project revenue received in the last quarter, delivery for these projects is expected to occur in the 2023-24 fiscal year, hence the \$4.8 million increase in Net Assets against Corporate Plan. This represents additional committed funds held in the Balance Sheet as Reserves for the new and delayed projects yet to be delivered and works carried forward into the next fiscal year.

### Consultancy expenditure

	2018-19		2019-20		2020-21		2021-22		2022-23	
	No.	\$ (excl. GST)								
Consultancies valued at \$10,000 or greater	27	665,437	26	631,581	16	498,346	17	445,745	9	205,997
Consultancies valued at less than \$10,000	29	112,412	25	100,254	9	68,734	16	58,651	21	121,916

Details of individual consultancies valued at \$10,000 or greater are outlined on the Goulburn Broken Catchment Management Authority website, at [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

### Information and Communication Technology expenditure

For the 2022-23 reporting period, Goulburn Broken CMA had a total ICT expenditure of \$1,172,817 with the details shown below.

All operational ICT expenditure	ICT Expenditure related to projects to create or enhance ICT capabilities			
	Business as usual ICT expenditure	Non-Business as usual ICT expenditure	Operational expenditure (OPEX)	Capital expenditure (CAPEX)
	Total \$	Total \$ = OPEX + CAPEX	\$	\$
992,231	46,506		31,544	14,962

ICT expenditure refers to the Goulburn Broken CMA's costs in providing business enabling ICT services within the current reporting period. It comprises Business as usual ICT expenditure and Non-business as usual ICT expenditure.

Non-business as usual expenditure relates to extending or enhancing the Goulburn Broken CMA's current ICT capabilities.

Business as usual ICT expenditure is all remaining ICT expenditure which primarily relates to ongoing activities to operate and maintain the current ICT capability.

Excludes expenditure on shared systems and security services including Dynamics 365 system management that has been recharged to CMAs.

### Other financial disclosures

#### Local Jobs First - Victorian Industry Participation Policy

During 2022-23, Goulburn Broken CMA did not commence any contracts valued at over \$1m which a VIPP Plan or LIDP was required.

#### Government advertising expenditure

Nil advertising campaigns with a media spend of \$100,000 or greater were entered into during the year.

#### Disclosure of major contracts

Goulburn Broken CMA did not award any major contracts (valued at \$10 million or more) during 2022-23.

#### Capital projects

Goulburn Broken CMA did not manage any capital projects of Total Estimated Investment of \$10 million or more.

**Disclosure of Emergency Procurement**

During 2022-23, Goulburn Broken CMA did not undertake Emergency Procurement as defined under the requirements of government policy and accompanying guidelines.

**Subsequent events**

There were no events occurring after balance date which may significantly affect the Goulburn Broken CMA's operations in subsequent reporting periods.

**Social Procurement Framework**

The Authority is fully committed to supporting the Government's directions under the Social Procurement Framework(SPF) and we recognise that we play a key role in advancing social and sustainable outcomes for Victorians.

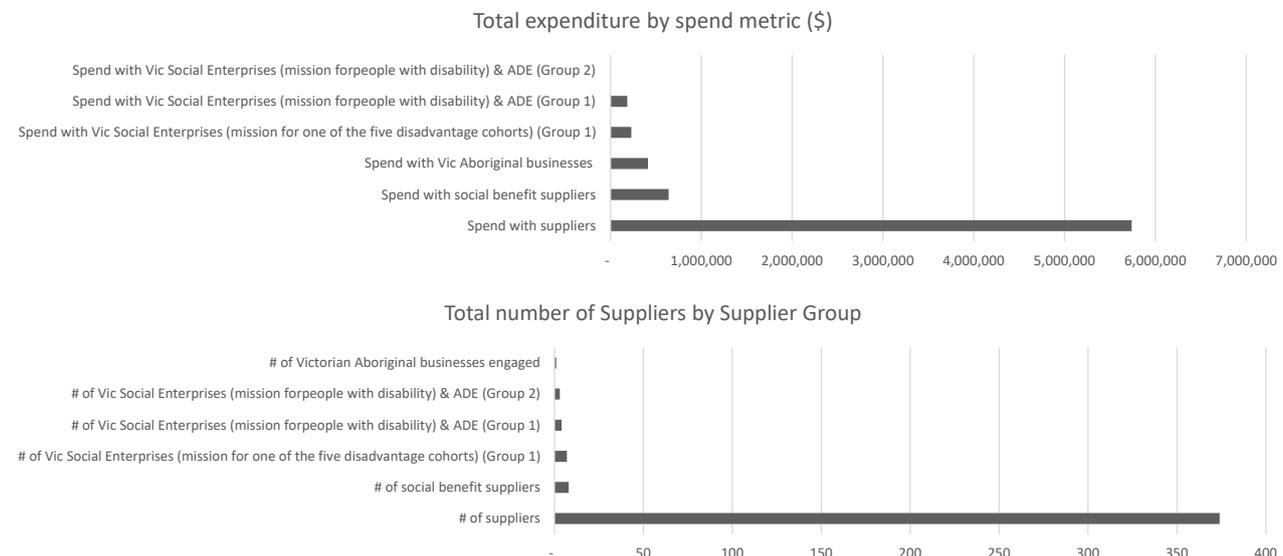
In 2022-23, the Authority has continued to implement the Social Procurement Strategy.

**2022-23 Social Procurement Framework Report**

SPF objective	Outcome	Metric	Unit of measure	2022-23 (Actual)
Opportunities for Victorian Aboriginal people	Purchasing from Victorian Aboriginal businesses	Total spend with Victorian Aboriginal businesses	\$ (excl. GST)	411,909
		Number of Victorian Aboriginal businesses engaged	Number	1
Opportunities for Victorians with disability	Purchasing from Victorian social enterprises and Australian Disability Enterprises	Total spend with Victorian social enterprises led by a mission for people with disability and Australian Disability Enterprises (ADEs)	\$ (excl. GST)	186,521
		Number of Victorian social enterprises led by a mission for people with disability and Australian Disability Enterprises (ADEs) engaged	Number	7
Opportunities for disadvantaged Victorians	Purchasing from Victorian social enterprises	Total spend with Victorian social enterprises led by a mission for the disadvantaged (a)	\$ (excl. GST)	228,194
		Number of Victorian social enterprises led by a mission for the disadvantaged (a) engaged	Number	7

- i. Victorians that at least fall under one of five disadvantaged cohorts (long-term unemployed people, disengaged people, single parents, migrants and refugees, and workers in transition).
- ii. Social enterprises verified by Social Traders

**2022-23 Social Benefit Comparative Summary**



## Achievements

Goulburn Broken CMA has continued to consider opportunities to progress social procurement with following progress on achieving targets to report:

- Implemented cultural heritage assessments process across business
- Collection from suppliers on social enterprise registration status
- Updated procurement categories to capture sustainable procurement data
- Commenced purchasing green energy
- Incorporation of social procurement in updated procurement framework.

## Case study

Goulburn Broken CMA will prioritise the upskilling of employees and further improvement of systems for the continuance of achieving SPF objectives in all aspects of the business practice.

The Goulburn Broken CMA 2022-23 Case Study focused on collaboration with the First Nations Registered Aboriginal Parties through the Taking Care of Country project. Funded by the Victorian Government's 'Our Catchment Our Communities Program', Goulburn Broken CMA is working with First Nations, government and non-government agencies, community groups, and landholders to deliver integrated catchment management on public and private land.

The long-term objective of the project is to increase native vegetation extent, quality and connectivity to ensure improved habitat for wildlife and ecological function. A critical part of the success of the project is working alongside two First Nations Registered Aboriginal Parties including Taungurung Land & Waters Council and Yorta Yorta Nation Aboriginal Corporation, to deliver key aspirations and objectives identified for healing Country.

The Taking Care of Country project commenced in 2021-22 and has completed its second year in 2022-23. The final year is underway, concluding in June 2024.

Goulburn Broken CMA has engaged two Victorian Aboriginal businesses including, Biik Cultural Land Management (Taungurung Country) and Woka Walla (Yorta Yorta Country). During 2022-23 Biik Cultural Land Management had a crew of approximately three Indigenous staff, while Woka Walla had a crew of approximately five staff, resulting in the engagement of approximately eight Victorian Aboriginal people employed by contractual agreement. Noting that there are also non-indigenous staff.

To date, Biik Cultural Land Management and Woka Walla crews have implemented a combined total of 400 hectares of woody weed control, involvement in 680 hectares of herbivore (e.g. rabbits) and carnivore (e.g. foxes) pest animal control, four flora and fauna assessments, and camera trapping to understand the presence of native and pest animal species. Over the life of the project, it is planned for Biik Cultural Land Management and Woka Walla to achieve three kilometres of fencing, 900 hectares of woody weed control; 900 hectares of pest animal, six fauna assessments, three flora assessments, and three written reports based on the assessments.

The works to date have resulted in a total expenditure with Victorian Aboriginal businesses (excl. GST) of \$125,000 to date; with a forecast of total expenditure of approximately \$500,000 by project end.

While the onground outputs help to achieve the long-term outcome for this project, it is important to recognise that a critical aspect of First Nations being engaged to implement works, is the value for First Nations to be on country, to heal community and Country. Co-design of the project has enabled both Taungurung and Yorta Yorta Nations to prioritise where works would occur as per their Country plan priorities; this being Reedy Lake for Taungurung and Gemmill's Sandhills and Yielima Sandhills for Yorta Yorta Nation. This recognises and respects each Nation's deep connection with their land, water and country and their individual cultural practices. We acknowledge and recognise the primacy of Traditional Owner obligations, rights and responsibilities to use and care for their traditional lands and waters. Goulburn Broken CMA values our ongoing partnerships with Yorta Yorta Nation Aboriginal Corporation and Taungurung Land and Waters Council for the health of Country and its people.

This collaboration meets the following SPF Objectives:

- Sustainable Victorian social enterprise and Aboriginal business sectors
- Opportunities for Victorian Aboriginal People.

It also achieved the following social or sustainable values:

- Increased employment opportunities for Victorian Aboriginal People
- Increase employment opportunities for sustainable Victorian social enterprise and Aboriginal business sectors.

## How this report is structured

The Goulburn Broken Catchment Management Authority has presented its audited general purpose financial statements for the financial year ended 30 June 2023 in the following structure to provide users with information about the Authority's stewardship of resource entrusted to it.

### Financial statements

- Declaration in the Financial statements
- Independent Auditor's report
- Comprehensive Operating Statement
- Balance Sheet
- Cash Flow Statement
- Statement of Changes in Equity

### Notes to the financial statements

#### 1. About this report

The basis on which the financial statements have been prepared and compliance with reporting regulations

#### 2. Funding delivery of our services

Income recognised in respect of Government contributions and other income sources

- 2.1 Income from transactions

#### 3. The cost of delivering services

Operating expenses of the Authority

- 3.1 Employee expenses
- 3.2 Materials, grants and consultancies
- 3.3 Information technology and communication expenses
- 3.4 Other operating expenses

#### 4. Key assets available to support output delivery

Land, buildings, works assets, plant and equipment, office furniture and equipment, motor vehicles, and intangible assets

- 4.1 Total property, plant and equipment
- 4.2 Intangible assets

#### 5. Other assets and liabilities

Other key assets and liabilities

- 5.1 Receivables
- 5.2 Payables
- 5.3 Contract Liabilities

#### 6. How we financed our operations

Cash flow information, commitments for expenditure and carry forward project funding

- 6.1 Cash flow information and balances
- 6.2 Leases
- 6.3 Carry forward project funding

#### 7. Risks, contingencies and valuation judgements

Financial risk management, contingent assets and liabilities as well as fair value determination

- 7.1 Financial instruments specific disclosures
- 7.2 Contingent assets and contingent liabilities
- 7.3 Fair value determination

#### 8. Other disclosures

Additional material disclosures required by accounting standards or otherwise, for the understanding of this financial report

- 8.1 Ex-gratia expenses
- 8.2 Other economic flows included in net result
- 8.3 Responsible persons
- 8.4 Remuneration of executive officers
- 8.5 Related parties
- 8.6 Remuneration of auditors
- 8.7 Subsequent events
- 8.8 Economic dependency
- 8.9 Australian Accounting Standards issued that are not yet effective
- 8.10 Glossary of technical terms

## Financial Statements

### Goulburn Broken Catchment Management Authority

Australian Business Number (ABN): 89 184 039 725

#### Declaration in the financial statements

The attached financial statements for the Goulburn Broken Catchment Management Authority (Goulburn Broken CMA) have been prepared in accordance with Direction 5.2 of the Standing Directions of the Assistant Treasurer under the *Financial Management Act 1994*, applicable Financial Reporting Directions, Australian Accounting Standards including Interpretations, and other mandatory professional reporting requirements.

We further state that, in our opinion, the information set out in the comprehensive operating statement, balance sheet, statement of changes in equity, cash flow statement and accompanying notes, presents fairly the financial transactions during the year ended 30 June 2023 and financial position of the Goulburn Broken CMA at 30 June 2023.

At the time of signing, we are not aware of any circumstance which would render any particulars included in the financial statements to be misleading or inaccurate.

We authorise the attached financial statements for issue on 29 August 2023.



H Reynolds

Chair of the Board  
Goulburn Broken Catchment Management Authority



C Cumming

Chief Executive Officer  
Goulburn Broken Catchment Management Authority



E Curtis

Chief Finance Officer  
Goulburn Broken Catchment Management Authority

29 August 2023

## Independent Auditor’s Report

### To the Board of the Goulburn Broken Catchment Management Authority

<b>Opinion</b>	<p>I have audited the financial report of the Goulburn Broken Catchment Management Authority (the authority) which comprises the:</p> <ul style="list-style-type: none"> <li>• balance sheet as at 30 June 2023</li> <li>• comprehensive operating statement for the year then ended</li> <li>• statement of changes in equity for the year then ended</li> <li>• cash flow statement for the year then ended</li> <li>• notes to the financial statements, including significant accounting policies</li> <li>• declaration in the financial statements.</li> </ul> <p>In my opinion, the financial report presents fairly, in all material respects, the financial position of the authority as at 30 June 2023 and its financial performance and cash flows for the year then ended in accordance with the financial reporting requirements of Part 7 of the <i>Financial Management Act 1994</i> and applicable Australian Accounting Standards.</p>
<b>Basis for Opinion</b>	<p>I have conducted my audit in accordance with the <i>Audit Act 1994</i> which incorporates the Australian Auditing Standards. I further describe my responsibilities under that Act and those standards in the <i>Auditor’s Responsibilities for the Audit of the Financial Report</i> section of my report.</p> <p>My independence is established by the <i>Constitution Act 1975</i>. My staff and I are independent of the authority in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board’s APES 110 <i>Code of Ethics for Professional Accountants</i> (the Code) that are relevant to my audit of the financial report in Victoria. My staff and I have also fulfilled our other ethical responsibilities in accordance with the Code.</p> <p>I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.</p>
<b>Board’s responsibilities for the financial report</b>	<p>The Board of the authority is responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards and the <i>Financial Management Act 1994</i>, and for such internal control as the Board determines is necessary to enable the preparation and fair presentation of a financial report that is free from material misstatement, whether due to fraud or error.</p> <p>In preparing the financial report, the Board is responsible for assessing the authority’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is inappropriate to do so.</p>

**Auditor's responsibilities for the audit of the financial report**

As required by the *Audit Act 1994*, my responsibility is to express an opinion on the financial report based on the audit. My objectives for the audit are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with the Australian Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the authority's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board
- conclude on the appropriateness of the Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the authority's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the authority to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

I communicate with the Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

MELBOURNE  
4 September 2023



Paul Martin  
*as delegate for the Auditor-General of Victoria*

## Comprehensive Operating Statement for the financial year ended 30 June 2023<sup>i</sup>

	Note	2023 \$000	2022 \$000
<b>Revenue and income from transactions</b>			
Government contributions	2.1.1	16,810	18,955
Interest		497	39
Other income	2.1.2	1,651	1,878
<b>Total revenue and income from transactions</b>		<b>18,958</b>	<b>20,872</b>
<b>Expenses from transactions</b>			
Employee expenses	3.1.1	(6,545)	(6,286)
Depreciation & amortisation	4.1.2	(520)	(528)
Materials, grants and consultancies	3.2	(1,270)	(1,954)
Contractors		(7,517)	(5,150)
Information technology and communication expenses	3.3	(924)	(1,170)
Other operating expenses	3.4	(882)	(722)
<b>Total expenses from transactions</b>		<b>(17,658)</b>	<b>(15,810)</b>
<b>Net result from transactions (net operating balance)</b>		<b>1,300</b>	<b>5,062</b>
<b>Other economic flows included in net result</b>			
Net gain/(loss) on non-financial assets <sup>ii</sup>	8.2	135	373
<b>Net result</b>		<b>1,435</b>	<b>5,435</b>
<b>Comprehensive result</b>		<b>1,435</b>	<b>5,435</b>

i. This format is aligned to AASB 1049 Whole of Government and General Government Sector Financial Reporting.

ii. Net gain/(loss) on non-financial assets includes unrealised and realised gains/(losses) from revaluations, impairments, and disposals of all physical assets and intangible assets, except when these are taken through the asset revaluation surplus.

The accompanying notes form part of these financial statements.

## Balance Sheet as at 30 June 2023<sup>i</sup>

	Note	2023 \$000	2022 \$000
<b>Assets</b>			
<b>Current assets</b>			
Cash and deposits	6.1	17,093	17,166
Receivables	5.1	1,587	1,296
Prepayments		276	208
<b>Total current assets</b>		<b>18,956</b>	<b>18,670</b>
<b>Non-current assets</b>			
Property, plant and equipment	4.1	1,618	1,922
<b>Total non-current assets</b>		<b>1,618</b>	<b>1,922</b>
<b>Total assets</b>		<b>20,574</b>	<b>20,592</b>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Payables	5.2	1,117	2,060
Contract Liabilities	5.3	106	85
Interest bearing liabilities	6.2.4	1,000	808
Employee benefits	3.1.2	1,783	2,030
<b>Total current liabilities</b>		<b>4,006</b>	<b>4,982</b>
<b>Non-current liabilities</b>			
Interest bearing liabilities	6.2.4	523	1,049
Employee benefits	3.1.2	81	32
<b>Total non-current liabilities</b>		<b>604</b>	<b>1,081</b>
<b>Total liabilities</b>		<b>4,610</b>	<b>6,063</b>
<b>Net assets</b>		<b>15,964</b>	<b>14,529</b>
<b>Equity</b>			
Contributed Capital		4,209	4,209
Reserves		11,755	10,320
<b>Net Worth</b>		<b>15,964</b>	<b>14,529</b>

i. This format is aligned to AASB 1049 Whole of Government and General Government Sector Financial Reporting.

The accompanying notes form part of these financial statements.

## Cash Flow Statement for the financial year ended 30 June 2023<sup>i</sup>

	Note	2023 \$000	2022 \$000
<b>Cash flow from operating activities</b>			
<b>Receipts</b>			
Receipts from Government		17,623	19,634
Revenue from other Government Entities		661	1,037
Goods and services tax received from the ATO <sup>ii</sup>		611	389
Interest received		497	39
Other receipts		1,023	1,262
<b>Total Receipts</b>		<b>20,415</b>	<b>22,361</b>
<b>Payments</b>			
Payments to suppliers and employees		(20,036)	(17,077)
Interest and other costs of finance paid		(36)	(43)
<b>Total Payments</b>		<b>(20,072)</b>	<b>(17,120)</b>
<b>Net cash flows from/(used in) operating activities</b>	6.1.1	<b>343</b>	<b>5,241</b>
<b>Cash flow from investing activities</b>			
Proceeds from sale of property, plant and equipment		214	623
Payment for property, plant and equipment		(167)	(264)
<b>Net cash flows from/(used in) investing activities</b>		<b>47</b>	<b>359</b>
<b>Cash flow from financing activities</b>			
Repayment of principal portion of lease liabilities <sup>iii</sup>		(463)	(411)
<b>Net cash from/(used in) financing activities</b>		<b>(463)</b>	<b>(411)</b>
<b>Net (decrease) / increase in cash held</b>		<b>(73)</b>	<b>5,189</b>
Cash and cash equivalents at beginning of year		17,166	11,977
<b>Cash and cash equivalents at end of year</b>	6.1	<b>17,093</b>	<b>17,166</b>

i. This format is aligned to AASB 1049 Whole of Government and General Government Sector Financial Reporting

ii. GST received from the Australian Taxation Office is presented on a net basis.

iii. The Authority has recognised cash payments for the principal portion of lease payments as financing activities; cash payments for the interest portion as operating activities consistent with the presentation of interest payments and short-term lease payments for leases and low-value assets as operating activities

The accompanying notes form part of these financial statements.

## Statement of Changes in Equity for the financial year ended 30 June 2023<sup>i</sup>

	Contributions by owners \$000	Reserves \$000	Accumulated funds \$000	Total \$000
Balance at 1 July 2021	4,209	4,885	-	9,094
Net result for the period	-	-	5,435	5,435
Transfer to / (from) Reserves		5,435	(5,435)	-
Balance at 30 June 2022	4,209	10,320	-	14,529
Total Comprehensive Surplus for the year			1,435	1,435
Transfer to / (from) Reserves		1,435	(1,435)	-
Balance at 30 June 2023	4,209	11,755	-	15,964

i. This format is aligned to AASB 1049 Whole of Government and General Government Sector Financial Reporting.

The accompanying notes form part of these financial statements.

# Notes to the financial statements for the year ended 30 June 2023

## 1. About this report

The Goulburn Broken Catchment Management Authority is a statutory authority of the State of Victoria, established on 1 July 1997 by the state government.

Its principal address is:

Goulburn Broken Catchment Management Authority  
168 Welsford St  
Shepparton VIC 3630

The Goulburn Broken CMA is responsible for coordinating land, water and biodiversity management of the Goulburn Broken Catchment. Further description of the nature of its operations and its principal activities is included in the Report of Operations, which does not form part of these financial statements.

### Basis of preparation

These financial statements are in Australian dollars and the historical cost convention is used unless a different measurement basis is specifically disclosed in the note associated with the item measured on a different basis.

The accrual basis of accounting has been applied in preparing these financial statements, whereby assets, liabilities, equity, revenue and expenses are recognised in the reporting period to which they relate, regardless of when cash is received or paid.

Accounting policies are selected and applied in a manner which ensures that the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events is reported.

Unless otherwise stated, all accounting policies applied are consistent with those of the prior year.

Judgements, estimates, and assumptions are required to be made about financial information being presented. The significant judgements made in the preparation of these financial statements are disclosed in the notes where amounts affected by those judgements are disclosed. Estimates and associated assumptions are based on professional judgements derived from historical experience and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates.

Revisions to accounting estimates are recognised in the period in which the estimate is revised and also in future periods that are affected by the revision. Judgements and assumptions made by management in the application of Australian Accounting Standards (AASs) that have significant effects on the financial statements and estimates are disclosed in the notes under the heading: 'Significant judgement or estimates', and relate to:

- determining transaction price and amounts allocated to performance obligations (Note 2.1);
- determining whether the performance obligations are sufficiently specific so as to determine whether the arrangement is within the scope of AASB 15 or AASB 1058 (Note 2.1);
- the timing of satisfaction of performance obligations (Note 2.1);
- employee benefit provisions (Note 3.1.2);
- determination whether configuration and customisation services are distinct from SaaS access (Note 4.2);
- for leases, determining whether the arrangement is in substance short-term arrangement (Note 6.2);
- estimating discount rate when not implicit in the lease (Note 6.2); and
- fair value measurements of assets and liabilities (Note 7.3).

### Rounding

Unless otherwise stated, amounts in the report have been rounded to the nearest \$1,000. Figures in the report may not equate due to rounding.

### Compliance Information

These general purpose financial statements have been prepared in accordance with the *Financial Management Act 1994* (FMA) and applicable AASs which include Interpretations, issued by the Australian Accounting Standards Board (AASB). In particular, they are presented in a manner consistent with the requirements of AASB 1049 Whole of Government and General Government Sector Financial Reporting.

Where appropriate, those AASs paragraphs applicable to not-for-profit entities have been applied. Accounting policies selected and applied in these financial statements ensure that the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events is reported.

## Notes to the financial statements for the year ended 30 June 2023

### October 2022 Floods

The Goulburn Broken catchment received significant rainfall with 2-day totals exceeding 200 mm on the 13 and 14 of October 2022. This led to a number of major flood class events, many historically significant, record breaking and for extended durations. These flood events have had significant community impact including over floor flooding in catchment communities such as Seymour, Murchison, Mooroopna, Shepparton and Barmah.

The Authorities Shepparton office was closed during the Shepparton flood due to flooding of the Office car park and employees were transitioned to working from home or other office locations during the flooding period. There was minimal impact on services and costs associated with any damages to the Shepparton office was covered by the landlord.

The floods and ongoing wet conditions have caused some minor delays in onground works in parts of the catchment, but overall impacts on expenditure were not material as works were able to be diverted to other areas.

The Authority received flood recovery funding in 2022-23 from the State Government which has been included as revenue in the financial statements and assessed as AASB 1058 as the agreements did not include sufficiently specific performance obligations (Note 2.1). The flood revenue received was not fully expended in 2022-23 and is included within carry forward project funding per note 6.3.

# Notes to the financial statements for the year ended 30 June 2023

## 2. Funding delivery of our services

### Introduction

The Authority's overall objective is for the coordinated control of natural resource management within the broader catchments of Goulburn Broken. The role of the Authority is to ensure effective implementation of the Regional Catchment Strategy. Associated with this role the Authority carries out strategic planning and advises Government.

To enable the Authority to deliver on its objectives, it receives revenue predominantly through State and Commonwealth Government Contributions.

### 2.1 Income from transactions

#### 2.1.1 Government contributions

	2023 \$000	2022 \$000
<b>Income recognised as income of not-for-profit entities</b>		
<b>State Government</b>		
Corporate and Statewide	1,137	1,504
Sustainable Irrigation	5,164	5,971
River Health	5,063	5,842
Floodplain Management	1,637	868
Land and Biodiversity	839	1,488
<b>Total State</b>	<b>13,840</b>	<b>15,673</b>
<b>Commonwealth Government</b>		
Other Commonwealth Funding	100	371
	<b>13,940</b>	<b>16,044</b>
<b>Revenue recognised as revenue from contract with customers</b>		
<b>Commonwealth Government</b>		
National Landcare Program	2,870	2,911
	<b>2,870</b>	<b>2,911</b>
<b>Total Government contributions</b>	<b>16,810</b>	<b>18,955</b>

#### Significant judgement: Grants contributions

The Authority has determined that all grant income is recognised as income of not-for-profit entities in accordance with AASB 1058, except for grants that are enforceable and with sufficiently specific performance obligations and accounted for as revenue from contracts with customers in accordance with AASB 15.

#### Grants recognised under AASB 1058

Income from grants without any sufficiently specific performance obligations, or that are not enforceable, is recognised when the Authority has unconditional right to receive cash which usually coincides with receipt of cash. On initial recognition of the assets, the Authority recognises any increase in liabilities, decrease in assets, and revenue ('related amount') in accordance with other Australian Accounting Standards. Related amounts may take the form of:

- revenue or a contract liability arising from a contract with a customer, in accordance with AASB 15;
- a lease liability in accordance with AASB 16;
- a financial instrument, in accordance with AASB 9; or
- a provision, in accordance with AASB 137 Provisions, Contingent Liabilities and Contingent Assets.

Revenue is recognised at the point in time the Authority satisfies the performance obligation by completing the relevant service as specified in the contract. This is recognised based on the consideration specified in the funding agreement and to the extent that it is highly probable a significant reversal of the revenue will not occur. As this funding is invoiced in arrears of the work performed, the funding payments are normally received after the relevant obligation is satisfied. As at 30 June 2023 the Authority recognised \$3,542K as revenue under AASB 15 (2022: \$3,335K), the remainder is received from Murray-Darling Basin Authority for The Living Murray Program (included under Other income).

## Notes to the financial statements for the year ended 30 June 2023

### 2.1.2 Other income

	2023 \$000	2022 \$000
Partnership Contributions - Government entities	767	687
Partnership Contributions - non-Government entities	62	282
Recoverable costs	725	804
Application fees	97	105
<b>Total other income</b>	<b>1,651</b>	<b>1,878</b>

Partnership contributions and Recoverable costs consists of funds received from organisations as partners in projects. The Authority has determined that all Other Income are recognised as income of not-for-profit entities in accordance with AASB 1058 as contracts are not enforceable or do not have sufficiently specific performance obligations.

All other income is recognised when the right to receive payment is established.

## Notes to the financial statements for the year ended 30 June 2023

### 3. The cost of delivering services

#### Introduction

This section provides an account of the expenses incurred by the Authority in delivering services. In Section 2, the funds that enable the provision of services were disclosed and in this note the costs associated with the provision of services are recorded.

#### 3.1 Employee expenses

##### 3.1.1 Employee expenses in the comprehensive operating statement

	2023 \$000	2022 \$000
Salaries & wages	5,217	4,888
Annual leave	431	407
Long service leave	17	162
Superannuation	567	530
FBT	201	214
Other	112	85
<b>Total employee expenses</b>	<b>6,545</b>	<b>6,286</b>

Employee expenses include all costs related to employment including wages and salaries, payroll tax, fringe benefits tax, leave entitlements, termination payments and WorkCover premiums.

The amount recognised in the comprehensive operating statement in relation to superannuation is employer contributions for members of both defined benefit and defined contribution superannuation plans that are paid or payable during the reporting period.

##### 3.1.2 Employee related provisions in the balance sheet

###### **Significant judgement: Employee benefit provisions**

In measuring employee benefits, consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using a single weighted average discount rate based on market yields of national government bonds in Australia that reflects the estimated timing and amount of benefit payment.

Provision is made for benefits accruing to employees in respect of wages and salaries, annual leave and long service leave (LSL) for services rendered to the reporting date and recorded as an expense during the period the services are delivered.

## Notes to the financial statements for the year ended 30 June 2023

	2023 \$000	2022 \$000
<b>Current provisions for employee benefits</b>		
<b>Other leave</b>		
Unconditional and expected to be settled within 12 months	12	10
<b>Annual leave</b>		
Unconditional and expected to settle within 12 months	317	324
Unconditional and expected to settle after 12 months	20	21
<b>Long service leave</b>		
Unconditional and expected to settle within 12 months	55	102
Unconditional and expected to settle after 12 months	1,173	1,346
<b>Provisions for on-costs<sup>i</sup></b>		
Unconditional and expected to settle within 12 months	49	54
Unconditional and expected to settle after 12 months	157	172
<b>Total current provisions</b>	<b>1,783</b>	<b>2,029</b>
i. On-costs include payroll tax, superannuation and worker's compensation Insurance		
<b>Non-current provisions for employee benefits</b>		
<b>Long service leave</b>		
Conditional and expected to be settled after 12 months	71	28
<b>Provision for on-costs</b>		
Conditional and expected to be settled after 12 months	10	4
<b>Total non-current provisions</b>	<b>81</b>	<b>32</b>
<b>Total provisions for employee benefits and on-costs</b>	<b>1,864</b>	<b>2,061</b>

### Reconciliation of movement in on-cost provision

	2023 \$000	2022 \$000
<b>Opening balance</b>	230	222
Additional provisions recognised	78	65
Reductions arising from payments/other sacrifices of future economic benefits	(78)	(66)
Unwind of discount and effect of changes in the discount rate/Reductions arising from re measurement of payroll tax	8	9
<b>Closing balance</b>	<b>238</b>	<b>230</b>

#### **Wages and salaries and annual leave:**

Liabilities for wages and salaries (including non-monetary benefits, time in lieu, annual leave and on-costs) are recognised as part of the employee benefit provision as current liabilities and are measured at their undiscounted amounts expected to be paid, because the Authority does not have an unconditional right to defer settlements of these liabilities.

The annual leave liability is classified as a current liability and measured at the undiscounted amount expected to be paid, as the Authority does not have an unconditional right to defer settlement of the liability for at least 12 months after the end of the reporting period.

No provision has been made for sick leave as all sick leave is non-vesting and it is not considered probable that the average sick leave taken in the future will be greater than the benefits accrued in the future. As sick leave is non-vesting, an expense is recognised in the Statement of Comprehensive Income as it is taken.

Employment on-costs such as payroll tax, workers compensation and superannuation are not employee benefits. They are disclosed separately as a component of the provision for employee benefits when the employment to which they relate has occurred.

## Notes to the financial statements for the year ended 30 June 2023

### Long service leave (LSL):

Regardless of the expected timing of settlement, unconditional LSL is classified as a current liability because the Authority does not have an unconditional right to defer the settlement of these liabilities.

Unconditional LSL liability amounts expected to be wholly settled within 12 months are measured at the nominal value.

Unconditional LSL liability amount that are not expected to be wholly settled within 12 months are measured as the present value of the estimated future cash outflows to be made by the entity.

Unconditional LSL represents long service leave entitlements accrued for employees with more than 7 years of continuous service.

Conditional LSL is classified as a non-current liability and measured as the present value of the estimated future cash outflows to be made by the entity.

Any gain or loss following revaluation of the present value of non-current LSL liability is recognised as a transaction, except to the extent that a gain or loss arises due to changes in bond interest rates for which it is then recognised as an 'other economic flow' in the net result.

### 3.1.3 Superannuation contributions

Employees of the Authority are entitled to receive superannuation benefits and the Authority contributes to both defined benefit and defined contribution plans. The defined benefit plans provide benefits based on year of service and final average salary.

Obligations for superannuation contributions are recognised as an expense in Comprehensive Operating Statement when they are made or due.

The Authority does not recognise any defined benefit liability for contributions to the Emergency Services and State Super because it has no legal or constructive obligation to pay future benefits relating to its employees. The Department of Treasury and Finance discloses in its annual financial statements the States net defined benefits cost related to the members of these plans as an administered liability. For contributions to the defined benefit fund with Vision Super (the Fund) the Authority does not use defined benefit accounting for its defined benefit obligations because the Fund's Defined Benefit plan is a pooled multi-employer sponsored plan.

The amount recognised in the comprehensive operating statement in relation to Superannuation is employer contributions for members of both defined benefit and defined contribution superannuation plans.

	Paid Contributions for the Year			Contributions outstanding at year end	
	2023 Rate %	2023 \$000	2022 \$000	2023 \$000	2022 \$000
Defined benefit plans: <sup>i</sup>					
Vision super defined benefits scheme	10.5	12	7	-	-
Emergency Services Superannuation Scheme	various	59	32	-	1
Defined contribution plans					
Vision super defined contribution scheme	10.5	229	138	-	-
Aware super <sup>ii</sup>	10.5	208	142	-	-
Other private schemes	10.5	296	211	-	-
		804	530		1

i. The bases for determining the level of contributions is determined by the various actuaries of the defined benefit superannuation plans

ii. Due to the merger of Vic Super and Aware Super on 1st May 2023 the Aware Super line has been restated for 2022 to include both Vic Super and Aware Super.

The expected contributions to be paid to the Defined Benefit category of Vision Super for the year ending 30 June 2024 is \$12,221.

## Notes to the financial statements for the year ended 30 June 2023

### 3.2 Materials, grants and consultancies

	2023 \$000	2022 \$000
Grants paid	629	999
Consultants	464	763
Materials	177	192
Total materials, maintenance, grants and consultancies	1,270	1,954

Grants are recognised in the period in which they are paid or payable.

Materials and consultancies are recognised as an expense in the reporting period in which they are incurred.

### 3.4 Information Technology and Communication expenses

	2023 \$000	2022 \$000
Information technology and communication expenses	924	1,170

Information Technology and Communication expenses includes costs for software, security services and support relating to shared services whereby Goulburn Broken CMA incurs the costs as lead agency and is shared across seven Catchment Management Authorities with costs recovered recorded in Other income as Recoverable costs (2.1.2). The amount of recoverable costs for shared services was \$325K (2022: \$433K).

### 3.5 Other operating expenses

	2023 \$000	2022 \$000
Victorian Auditor-General's Office for audit of financial statements	24	24
Internal audit expenses	24	25
Short-term lease expenses	234	159
Events and Publicity	85	75
Motor vehicle operating expenses	258	231
Insurance	61	54
Office expenses	89	83
Printing and stationery	15	10
Other expenses	92	61
Total other operating expenses	882	722

#### Short-term lease expenses

The following lease payments are recognised on a straight-line basis:

- Short-term leases – leases with a term 12 months or less; and
- Low value leases – leases with the underlying asset's fair value (when new, regardless of the age of the asset being leased) is no more than \$10 000.

Variable lease payments that are not included in the measurement of the lease liability (i.e. variable lease payments that do not depend on an index or a rate and which are not, in substance fixed) such as those based on performance or usage of the underlying asset, are recognised in the Comprehensive operating statement (except for payments which has been included in the carrying amount of another asset) in the period in which the event or condition that triggers those payments occur.

## Notes to the financial statements for the year ended 30 June 2023

### 4. Key assets available to support output delivery

#### Introduction

The Authority controls property and other investments that are utilised in fulfilling its objectives and conducting its activities. They represent the key resources that have been entrusted to the Authority to be utilised for delivery of those outputs.

#### Significant judgement: Fair value measurement

Where the assets included in this section are carried at fair value, additional information is disclosed in Note 7.3 about how those fair values were determined.

#### 4.1 Total property, plant and equipment

##### Initial recognition:

Items of property, plant and equipment, are measured initially at cost and subsequently revalued at fair value less accumulated depreciation and impairment. Where an asset is acquired for no or nominal cost, the cost is its fair value at the date of acquisition.

Items with a cost or value in excess of \$1,500 and a useful life of more than one year are recognised as an asset. All other assets acquired are expensed.

##### Subsequent measurement:

Property, plant and equipment are subsequently measured at fair value less accumulated depreciation and impairment.

Buildings relate to specialised portable structures and are valued based on depreciated replacement cost.

Vehicles are valued using the depreciated replacement cost method. The Authority acquires new vehicles and at times disposes of them before the end of their economic life. The process of acquisition, use and disposal in the market is managed by experienced external fleet managers who set relevant depreciation rates during use to reflect the utilisation of the vehicles.

Fair value for plant and equipment that are specialised in use (such that it is rarely sold other than as part of a going concern) is determined using the depreciated replacement cost method.

Note 7.3 includes additional information in connection with fair value determination of property, plant and equipment.

	Gross carrying amount		Accumulated Depreciation		Net carrying amount	
	2023 \$000	2022 \$000	2023 \$000	2022 \$000	2023 \$000	2022 \$000
Buildings	1,209	1,209	(715)	(546)	494	663
Plant and equipment	1,526	1,469	(1,360)	(1,332)	166	137
Motor vehicles	1,558	1,547	(600)	(425)	958	1,122
	4,293	4,225	(2,675)	(2,303)	1,618	1,922

##### 4.1.1 Total right-of-use assets: buildings and vehicles

This note explores right-of-use assets, a subset of the Authority's total assets, where right-of-use assets represent the Authority's right to use an underlying asset for the lease term.

The following tables are subsets of buildings and vehicles by right-of-use assets.

	Gross carrying amount		Accumulated Depreciation		Net carrying amount	
	2023 \$000	2022 \$000	2023 \$000	2022 \$000	2023 \$000	2022 \$000
Right of Use Buildings at fair value	1,171	1,171	(677)	(508)	494	663
Motor vehicles at fair value	1,516	1,505	(558)	(383)	958	1,122
Net Carrying amount	2,687	2,676	(1,235)	(891)	1,452	1,785

## Notes to the financial statements for the year ended 30 June 2023

	Right of Use Buildings at fair value \$000	Motor vehicles at fair value \$000
<b>2023</b>		
Opening balance – 1 July 2022	663	1,122
Additions	-	190
Disposals	-	(79)
Depreciation expense	(169)	(275)
Closing balance – 30 June 2023	494	958
<b>2022</b>		
Opening balance – 1 July 2021	832	1,172
Additions	-	448
Disposals	-	(244)
Depreciation expense	(169)	(254)
Closing balance – 30 June 2022	663	1,122

### Right-of-use asset acquired by lessees – Initial measurement:

The Authority recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost which comprises the initial amount of the lease liability adjusted for:

- any lease payments made at or before the commencement date less any lease incentive received; plus
- any initial direct costs incurred.

### Right-of-use asset – Subsequent measurement

Non-Financial Physical Assets, right-of-use assets are subject to fair value, whereby management undertake an assessment to determine whether the current lease payments under the contract approximate current market rentals for equivalent properties that would be paid in the current environment.

Management have completed an assessment at 30 June 2023 comparing current lease payments against current market rentals for equivalent properties and has determined that no adjustment to the right-of-use asset or liability is required.

Buildings relate to the Authority's leased offices and are valued at fair value less depreciation and impairment.

Vehicles are valued using the depreciated replacement cost method. Goulburn Broken CMA acquires new vehicles and at times disposes of them before the end of their economic life. The process of acquisition, use and disposal in the market is managed by experienced external fleet managers who set relevant depreciation rates during use to reflect the utilisation of the vehicles.

Fair value for plant and equipment that are specialised in use (such that it is rarely sold other than as part of a going concern) is determined using the depreciated replacement cost method.

Note 7.3 includes additional information in connection with fair value determination of property, plant and equipment.

## Notes to the financial statements for the year ended 30 June 2023

### 4.1.2 Depreciation and amortisation

Charge for the period <sup>i</sup>	2023 \$000	2022 \$000
Buildings	169	169
Plant & equipment	76	78
Motor vehicles	275	281
<b>Total depreciation and amortisation</b>	<b>520</b>	<b>528</b>

i. The table incorporates depreciation of right-of-use assets as per AASB 16 Leases.

All non-financial physical assets that have finite useful lives are depreciated.

Depreciation is calculated on a straight-line basis, at rates that allocate the asset's value, less any estimated residual value, over its estimated useful life. Typical estimated useful lives for the different asset classes for current and prior years are included in the table below:

Asset	Useful life
Buildings: Leased assets	7 years
Plant and equipment	2.5 - 10 years
Motor vehicles (including leased assets)	5-8 years
Intangible assets	3-5 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each annual reporting period, and adjustments made where appropriate.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term.

#### Impairment

Non-financial assets, including items of Property, Plant and Equipment and intangibles with infinite lives, are tested for impairment whenever there is an indication that the assets may be impaired.

The assets concerned are tested as to whether their carrying value exceeds their recoverable amount. Where an asset's carrying value exceeds its recoverable amount, the difference is written off as an 'other economic flow', except to the extent that it can be debited to an asset revaluation surplus amount applicable to that class of asset.

If there is an indication that there has been a reversal in impairment, the carrying amount shall be increased to its recoverable amount. However this reversal should not increase the asset's carrying amount above what would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised in prior years.

The recoverable amount for most assets is measured at the higher of depreciated replacement cost and fair value less costs to sell. Recoverable amount for assets held primarily to generate net cash inflows is measured at the higher of the present value of future cash flows expected to be obtained from the asset and fair value less costs to sell. As at 30 June 2023 there were no impairments assessed (2022: Nil).

## Notes to the financial statements for the year ended 30 June 2023

### 4.1.3 Reconciliation of movements in carrying values of property, plant and equipment

	Buildings at fair value \$000	Plant and equipment at fair value \$000	Motor vehicles at fair value \$000	Total \$000
<b>2023</b>				
Opening balance	663	137	1,122	1,922
Additions	-	105	190	295
Disposals	-	-	(79)	(79)
Depreciation	(169)	(76)	(275)	(520)
Closing balance	494	166	958	1,618
<b>2022</b>				
Opening balance	832	195	1,205	2,232
Additions	-	20	448	468
Disposals	-	-	(250)	(250)
Depreciation	(169)	(78)	(281)	(528)
Closing balance	663	137	1,122	1,922

### 4.2 Intangible assets

#### **Significant judgement: Determination whether configuration and customisation services are distinct from SaaS access**

Where the SaaS arrangement supplier provides both configuration and customisation services, judgement has been applied to determine whether each of these services are distinct or not from the underlying use of the SaaS application software. Distinct configuration and customisation costs are expensed as incurred as the software is configured or customised (i.e. upfront). Non-distinct configuration and customisation costs are expensed over the SaaS contract term.

Computer software	2023 \$000	2022 \$000
<b>Gross carrying amount</b>		
Opening Balance	36	255
Acquisition adjustment <sup>i</sup>	-	(219)
Additions	-	-
Disposals	-	-
Closing balance	36	36
<b>Accumulated Amortisation</b>		
Opening Balance	(36)	(54)
Amortisation	-	18
Closing balance	(36)	(36)
Net book value at end of financial year	-	-

<sup>i</sup> Adjustment relates to change in accounting policy relating to SaaS arrangements.

## Notes to the financial statements for the year ended 30 June 2023

### Initial recognition

Purchased intangible assets are initially recognised at cost. When the recognition criteria in AASB 138 Intangible Assets is met, internally generated intangible assets are recognised at cost. Subsequently, intangible assets with finite useful lives are carried at cost less accumulated amortisation and accumulated impairment losses. Depreciation and amortisation begins when the asset is available for use, that is, when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.

For the 2021-22 fiscal year, \$201K of costs previously capitalised under AASB 138 as an intangible asset was fully written-off and expensed as information technology and communication expenses.

### Subsequent measurement

Intangible produced assets with finite useful lives, are amortised as an 'expense from transactions' on a straight line basis over their useful lives.

Intangible non-produced assets with finite lives are amortised as an 'other economic flow' on a straight line basis over their useful lives. The amortisation period is five years.

### Impairment of intangible assets

Intangible assets with finite useful lives are tested for impairment whenever an indication of impairment is identified.

The policy in connection with testing for impairment is outlined in section 4.1.2.

### Software-as-a-Service (SaaS) arrangements

SaaS arrangements are service contracts providing the Authority with the right to access the cloud provider's application software over the contract period. As such, the Authority does not recognise the contract as an intangible asset.

## Notes to the financial statements for the year ended 30 June 2023

### 5. Other assets and liabilities

#### Introduction

This section sets out those assets and liabilities that arose from the Authority's operations.

#### 5.1 Receivables

<b>Current receivables</b>	<b>2023 \$000</b>	<b>2022 \$000</b>
<b>Contractual</b>		
Government grants receivables	1,402	1,087
Trade receivables	13	100
<b>Total contractual</b>	<b>1,415</b>	<b>1,187</b>
<b>Statutory</b>		
GST input tax credits recoverable	172	94
Payroll Tax receivable	-	15
<b>Total current receivables</b>	<b>1,587</b>	<b>1,296</b>

Trade and other receivables are due for settlement 30 days from the end of the month that they were invoiced.

There are no material financial assets that are individually determined to be impaired.

Details about the Authority's impairment policies, the Authority's exposure to credit risk, and the calculation of the loss allowance are set out in note 7.1.1.

#### 5.2 Payables

<b>Current payables</b>	<b>2023 \$000</b>	<b>2022 \$000</b>
<b>Contractual</b>		
Trade payables	779	1,279
Accrued expenses	277	721
	<b>1,056</b>	<b>2,000</b>
<b>Statutory</b>		
FBT payable	56	60
Payroll tax	5	-
	<b>61</b>	<b>60</b>
<b>Total current payables</b>	<b>1,117</b>	<b>2,060</b>

Payables for supplies and services have an average credit period of 30 days.

#### 5.3 Contract Liabilities

<b>Contract liabilities</b>	<b>2023 \$000</b>	<b>2022 \$000</b>
Opening balance	85	-
Add: Payments received for performance obligations yet to be completed during the period	107	85
Less: Performance obligations in contract liabilities which were satisfied in the current financial year	(85)	-
<b>Total current contract liabilities</b>	<b>107</b>	<b>85</b>

## Notes to the financial statements for the year ended 30 June 2023

### 6. How we financed our operations

This section provides information on the sources of finance utilised by the Authority during its operations and other information related to financing activities of the Authority.

This section includes disclosures of balances that are financial instruments, such as cash balances. Note 7.1 provides additional, specific financial instrument disclosures.

#### 6.1 Cash flow information and balances

Cash and deposits, including cash equivalents, comprise cash on hand and cash at bank, deposits at call and those highly liquid investments with an original maturity of three months or less, which are held for the purpose of meeting short-term cash commitments rather than for investment purposes, and which are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

Cash and deposits disclosed in the balance sheet	2023 \$000	2022 \$000
Cash on hand	1	1
Cash at bank	17,092	17,165
Balance as per cash flow statement	17,093	17,166

#### 6.1.1 Reconciliation of net result to cash flow from operating activities

	2023 \$000	2022 \$000
Net result for the period	1,435	5,435
<b>Non-cash movements</b>		
(Gain) / loss on disposal of non-current assets	(135)	(373)
Depreciation and amortisation of non-current assets	520	528
Write off of Intangible Asset	-	201
Bad debt written off	1	-
<b>Movements in assets and liabilities</b>		
Decrease/(increase) in receivables	(291)	184
Decrease/(increase) in prepayments	(68)	(52)
(Decrease)/increase in contract liabilities	21	84
(Decrease)/increase in payables	(943)	(753)
(Decrease)/increase in employee benefits	(197)	(13)
Net cash flows from/(used in) operating activities	343	5,241

#### 6.2 Leases

##### **Significant judgement: Lease Terms**

In determining the lease term, the Authority considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. The assessment is reviewed if a significant event or a significant change in circumstances occurs which affects this assessment.

Information about leases for which the Authority is a lessee is presented below.

##### **The Authorities leasing activities**

The Authority leases buildings and motor vehicles. The lease contracts are typically made for fixed periods of 1-5 years with an option to renew the lease after that date. Lease payments for buildings are renegotiated every five years to reflect market rentals.

Property leases with contract terms of 1 year or less and a value less than \$10,000 are short-term or low value leases. The Authority has elected not to recognise right-of-use assets and lease liabilities for these leases.

##### **6.2.1 Right-of-use Assets**

Right-of-use assets are presented in note 4.1.1.

## Notes to the financial statements for the year ended 30 June 2023

### 6.2.2 Amounts recognised in the Comprehensive Operating Statement

The following amounts are recognised in the Comprehensive Operating Statement relating to leases:

	2023 \$000	2022 \$000
Interest expense on lease liabilities	36	43
Expenses relating to short term leases	234	159
Depreciation	444	423
Total amount recognised in the comprehensive operating statement	714	625

### 6.2.3 Amounts recognised in the Cash Flow Statement

The following amounts are recognised in the Cash Flow Statement for the year ending 30 June 2023 relating to leases.

	2023 \$000	2022 \$000
Total cash outflow for leases	561	698

For any new contracts, the Authority considers whether a contract is, or contains a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration'. To apply this definition the Authority assesses whether the contract meets three key evaluations:

- Whether the contract contains an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Authority and for which the supplier does not have substantive substitution rights;
- Whether the Authority has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use, considering its rights within the defined scope of the contract and the Authority has the right to direct the use of the identified asset throughout the period of use; and
- Whether the Authority has the right to take decisions in respect of 'how and for what purpose' the asset is used throughout the period of use.

#### **Separation of lease and non-lease components**

At inception or on reassessment of a contract that contains a lease component, the lease contract is assessed to separate out and account separately for non-lease components and exclude these amounts when determining the lease liability and right-of-use asset amount.

#### **Recognition and measurement of leases as a lessee**

##### **Lease Liability – initial measurement**

The lease liability is initially measured at the present value of the lease payments unpaid at the commencement date, discounted using the interest rate implicit in the lease.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments (including in-substance fixed payments) less any lease incentive receivable;
- variable payments based on an index or rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- payments arising from purchase and termination options reasonably certain to be exercised.

##### **Lease Liability – subsequent measurement**

Subsequent to initial measurement, the liability will be reduced for payments made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes in-substance fixed payments.

When the lease liability is remeasured, the corresponding adjustment is reflected in the right-of-use asset, or profit and loss if the right-of-use asset is already reduced to zero.

##### **Short-term leases**

The Authority has elected to account for short-term leases using the practical expedients. Instead of recognising a right-of-use asset and lease liability, the payments in relation to these are recognised as an expense in profit or loss on a straight-line basis over the lease term. At 30 June 2023, the Authority was committed to short term leases and the total commitment at that date was \$126K (2022: \$130K).

##### **Presentation of right-of-use assets and lease liabilities**

The Authority presents right-of-use assets as 'buildings' and 'motor vehicles'. Lease liabilities are presented as 'Interest bearing liabilities' in the balance sheet.

## Notes to the financial statements for the year ended 30 June 2023

### 6.2.4 Total Interest bearing liabilities

Interest bearing liabilities	Minimum future lease payments <sup>i</sup>	
	2023 \$000	2022 \$000
Not longer than 1 year	1,020	843
Longer than 1 year but not longer than 5 years	531	1,074
Longer than 5 years	-	-
Minimum future lease payments	1,551	1,917
Less future finance charges	(29)	(60)
Present value of minimum lease payments	1,522	1,857
Included in the financial statements as:		
Interest bearing liabilities - current	1,000	808
Interest bearing liabilities - non-current	522	1,049
<b>Total</b>	<b>1,522</b>	<b>1,857</b>

i. Minimum future lease payments include the aggregate of all base payments and any guaranteed residual.

Lease liabilities relate to motor vehicles and building leases. The motor vehicles are leased from VicFleet for two to three years.

### 6.3 Carry forward project funding

Catchment Management Authorities are responsible for the facilitation and coordination of catchments in an integrated and sustainable manner. This is achieved by undertaking projects funded by Victorian and Australian Government programs. The Authority received funding for specific projects which are guided by the Regional Catchment Strategy and delivered in line with the Authority's Corporate Plan approved by the Minister for Water.

The projects funded by the State and Commonwealth Governments can be undertaken over multiple financial years and funding is received at various stages of the project life based on contractual agreements. At the end of the financial year there are some projects that have not reached completion but will be completed within the contractual terms in future financial periods.

Refer to Statement of Changes in Equity for Reserves. At balance date the Authority has cash and cash equivalents that will be utilised to complete these projects in future financial years.

# Notes to the financial statements for the year ended 30 June 2023

## 7. Risks, contingencies and valuation judgements

### Introduction

The Authority is exposed to risk from its activities and outside factors. In addition, it is often necessary to make judgements and estimates associated with recognition and measurement of items in the financial statements. This section sets out financial instrument specific information, (including exposures to financial risks) as well as those items that are contingent in nature or require a higher level of judgement to be applied, which for the Authority relate mainly to fair value determination.

### 7.1 Financial instruments specific disclosures

#### Introduction

Financial instruments arise out of contractual agreements that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Statutory receivables and payables (FBT, GST etc.) are not considered financial instruments.

#### **Categories of financial instruments**

Financial Assets are measured at amortised cost if they are held by the Authority to collect contractual cash flows, the contractual terms give rise to cash flows that are solely payments of principal and interest, and if they not designated as fair value through net result. These assets are initially recognised at fair value plus any directly attributable transaction costs. Subsequent to initial measurement, these financial assets are measured at amortised cost using the effective interest method less any impairment. The financial assets at amortised cost category includes cash and deposits, and trade and other receivables (excluding statutory receivables).

Financial liabilities at amortised cost are initially recognised on the date they originated. They are initially measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, these financial instruments are measured at amortised cost with any difference between the initial recognised amount and the redemption value being recognised in profit and loss over the period of the interest bearing liability, using the effective interest rate method. Financial instrument liabilities measured at amortised cost include all of the Authority's contractual payables (excluding statutory payables), and lease liabilities.

A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires.

#### **7.1.1 Financial instruments: Impairment of Financial Assets**

The Authority has been recording the allowance for expected credit loss for the relevant financial instruments, applying AASB 9's Expected Credit Loss Approach. Subject to AASB 9 impairment assessment include the Authority's contractual receivables and statutory receivables.

#### **Contractual receivables at amortised cost**

The Authority has a low expected loss rate due to majority of funding sourced from State and Commonwealth government. The expected loss rate for the year ending 30 June 2023 has been calculated at 0%, and as such no loss allowance has been recognised.

#### **7.1.2 Financial risk management objectives and policies**

The Authority's main financial risks include credit risk, liquidity risk and interest rate risk. The Authority manages these financial risks in accordance with its financial risk management policy.

The Authority uses different methods to measure and manage the different risks to which it is exposed. Primary responsibility for the identification and management of financial risks rests with the Audit, Risk and Compliance committee of the Authority.

#### **Financial instruments: Credit risk**

Credit risk refers to the possibility that a borrower will default on its financial obligations as and when they fall due. The Authority's exposure to credit risk arises from the potential default of a counter party on their contractual obligations resulting in financial loss to the Authority. Credit risk is measured at fair value and is monitored on a regular basis.

Credit risk associated with the Authority's contractual financial assets is minimal because the main debtor is the Victorian Government. For debtors other than the Government, the Authority has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral where appropriate.

#### **Financial instruments: Liquidity risk**

Liquidity risk arises from being unable to meet financial obligations as they fall due. The Authority operates under the Government fair payments policy of settling financial obligations within 30 days and in the event of a dispute, making payments within 30 days from the date of resolution.

The Authority's exposure to liquidity risk is deemed insignificant based on prior periods' data and current assessment of risk. The Authority does not have any borrowings and maintains high levels of cash readily available to meet its financial obligations. The Authority manages its liquidity risk by maintaining adequate cash reserves and continually monitoring the Authority's expenditure commitments and cash flow needs.

## Notes to the financial statements for the year ended 30 June 2023

### Financial instruments: Market risk

The Authority's exposure to market risk is primarily through interest rate risk with significant surplus funds held in the Central Banking System. The Authority has no exposure to foreign exchange risk or other price risk.

Cash flow interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Authority is required to invest all funds with the State Government Central Banking System (CBS) in compliance with the Standing Directions 2018 under the *Financial Management Act 1994*. The floating rates provided by the Central Banking System expose the Authority to interest rate risk.

Management monitors movements in interest rates on an as required basis.

The carrying amounts of financial assets and financial liabilities that are exposed to interest rates and the Authority's sensitivity to interest rate risk are set out in the table that follows.

### Interest rate risk sensitivity

The sensitivity analysis below shows the impact on the Authority's net result and equity for a movement of 100 basis points up and down in market interest rates. The Authority believes a movement of 1% over the next year is reasonable given consideration of past performances and recent movements in interest rates.

	Carrying amount \$000	Interest rate			
		-1 per cent		+1 per cent	
		Net result \$000	Equity \$000	Net result \$000	Equity \$000
<b>2023</b>					
Cash and deposits <sup>i</sup>	17,093	(171)	(171)	171	171
<b>2022</b>					
Cash and deposits <sup>i</sup>	17,166	(429)	(429)	429	429

i. Cash and deposits includes \$17,093K (2022: 17,166K) that is exposed to floating rates movements. Sensitivities to these movements are calculated as follows:  
 2023: \$17,093K x 0.01 = \$170,928  
 2022: \$17,166K x 0.025 = \$429,150

## 7.2 Contingent assets and contingent liabilities

Contingent assets and contingent liabilities are not recognised in the balance sheet but are disclosed and, if quantifiable, are measured at nominal value. There are no contingent assets or liabilities at 30 June 2023 (2022: nil).

## 7.3 Fair value determination

### Significant judgement: Fair value measurements of assets and liabilities

Fair value determination requires judgement and the use of assumptions. This section discloses the most significant assumptions used in determining fair values. Changes to assumptions could have a material impact on the results and financial position of the Authority.

### 7.3.1 Fair value hierarchy

In determining fair values, a number of inputs are used. To increase consistency and comparability in the financial statements, these inputs are categorised into three levels, also known as the fair value hierarchy. The levels are as follows:

- Level 1 – Quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 – Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable; and
- Level 3 – Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

The Authority determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

## Notes to the financial statements for the year ended 30 June 2023

### 7.3.2 Fair value determination of financial assets and liabilities

The Authority currently holds a range of financial instruments that are recorded in the financial statements where the carrying amounts are a reasonable approximation of fair value, either due to their short-term nature or with the expectation that they will be paid in full by the end of the 2022-23 reporting period.

These financial instruments include:

Financial assets	Financial liabilities
Cash and deposits	
Receivables:	Payables:
• Trade receivables	• Trade payables
• Accrued revenue	• Accrued expenses
	• Lease liabilities

### 7.3.3 Fair value determination: non-financial physical assets

#### Fair value measurement hierarchy

Non-specialised land (buildings) are fair valued in accordance with level 2 categorisation and plant and equipment and motor vehicles are fair valued as level 3.

There have been no transfers between levels during the period.

The following methods and assumptions were used to estimate fair value:

#### Buildings

Buildings – right of use asset is valued based on the net present value of management's estimate of current market rentals for an equivalent property, using a discount rate based on the Authority's incremental borrowing rate (refer note 4.1.1).

#### Motor vehicles

Motor vehicles are valued using the depreciated replacement cost method. The Authority acquires new vehicles and disposes of them before the end of their economic life. The process of acquisition, use and disposal in the market is managed by experienced fleet managers within VicFleet and the Authority who set the relevant depreciation rates during use to reflect the utilisation of the motor vehicles (refer note 4.1.1).

#### Plant and equipment and computer equipment

Plant and equipment and computer equipment is held at fair value. When plant and equipment or computer equipment is specialised in use, such that it is rarely sold other than as part of a going concern, fair value is determined using the depreciated replacement cost method.

There were no changes in valuation techniques throughout the period to 30 June 2023.

For all assets measured at fair value, the current use is considered the highest and best use.

See note 4.1.3.

### Description of unobservable inputs to level 3 valuations

	Valuation technique	Significant unobservable inputs
Plant and equipment – Specialised	Depreciated replacement cost	Cost per unit Useful life of plant and equipment
Computer equipment	Depreciated replacement cost	Cost per unit Useful life of plant and equipment
Motor vehicles	Depreciated replacement cost	Cost per unit Useful life of motor vehicles

## Notes to the financial statements for the year ended 30 June 2023

### 8. Other disclosures

This section provides additional material disclosures required by accounting standards or otherwise, for the understanding of this financial report.

#### 8.1 Ex-gratia expenses

Ex-gratia expenses are the voluntary payments of money or other non-monetary benefit (e.g. a write-off) that is not made either to acquire goods, services or other benefits for the entity to meet a legal liability, or to settle or resolve a possible legal liability of or claim against the entity.

The Authority had no Ex-gratia expenses for the year ending 30 June 2023 (2022 \$nil).

#### 8.2 Other economic flows included in net result

Other economic flows measure the change in volume or value of assets or liabilities that do not result from transactions.

Net gain/(loss) on non-financial assets	2023 \$000	2022 \$000
<b>Net gain/(loss) on disposal of property, plant and equipment</b>		
Proceeds from sale of non-financial assets	214	623
Less written down value	(79)	(250)
Net gain/(loss) on non-financial assets	135	373

#### 8.3 Responsible persons

In accordance with the Ministerial Directions issued by the Assistant Treasurer under the *Financial Management Act 1994*, the following disclosures are made regarding responsible persons for the reporting period.

##### Names

The persons who held the positions of Ministers and Accountable Officers of the Authority at any time during the financial year were:

Minister for Water	The Hon. Harriet Shing MP	1 July 2022 to 30 June 2023
Minister for Environment and Climate Action	The Hon. Lily D'Ambrosio MP	1 July 2022 to 4 December 2022
Minister for Environment	The Hon. Ingrid Stitt MP	5 December 2022 to 30 June 2023

Position		Period
Chair	H Reynolds	1 July 2022 to 30 June 2023
Board Member	A Weston	1 July 2022 to 30 June 2023
Board Member	R Harris	1 July 2022 to 30 June 2023
Board Member	S Parker	1 July 2022 to 30 June 2023
Board Member	L Miller	1 July 2022 to 30 June 2023
Board Member	L McLean	1 July 2022 to 30 June 2023
Board Member	A McClaren	1 July 2022 to 30 June 2023
Board Member	J Smith	1 July 2022 to 30 June 2023
CEO	C Cumming	1 July 2022 to 30 June 2023 <sup>i</sup>
Acting CEO	M Turner	5 August 2022 to 14 August 2022
Acting CEO	E Curtis	1 June 2023 to 18 June 2023
Acting CEO	C Walters	19 June 2023 to 30 June 2023

i. This was the period service apart from when there was an acting CEO.

## Notes to the financial statements for the year ended 30 June 2023

### Remuneration

Remuneration received or receivable by all Responsible Persons in connection with the management of the Authority during the reporting period is reported in the table below:

Income bands	2023	2022
\$1-\$9,999	3	3
\$10,000-\$19,999	7	7
\$20,000-\$29,999	1	1
\$240,000-\$249,999	-	1
\$280,000-\$289,999	1	-
Total number of responsible persons	12	12
Total remuneration \$	\$428,966	\$375,431

The compensation detailed above excludes the salaries and benefits the Portfolio Ministers receive. The Ministers' remuneration and allowances is set by the *Parliamentary Salaries and Superannuation Act 1968* and is reported within the State's Annual Financial Report.

### 8.4 Remuneration of executive officers

The Goulburn Broken CMA did not have any executive officers, other than the CEO, to whom the Victorian Government's Public Entity Executive Remuneration (PEER) Policy applies. The CEO is an accountable officer and therefore disclosed under Note 8.3.

### 8.5 Related parties

The Authority is a wholly owned and controlled entity of the State of Victoria. Related parties of the Authority include:

- all key management personnel and their close family members;
- all cabinet ministers and their close family members; and
- all departments and public sector entities that are controlled and consolidated into the whole of state consolidated financial statements.

All related party transactions have been entered into on an arm's length basis.

### Significant transactions with government-related entities

During the year, income received from government-related entities for grants and reimbursements that enable the Goulburn Broken CMA to deliver on the Regional Catchment Strategy, statutory obligations and manage IT platform across the sector. The Authority received funding from the following government-related entities under normal commercial terms and conditions:

Entity	2023 Funding received (\$000)	2022 Funding received (\$000)	2023 Funding receivable (\$000)	2022 Funding receivable (\$000)
Department of Energy, Environment and Climate Action (Formerly DELWP)	14,461	16,210	-	-
Wimmera Catchment Management Authority	170	231	30	-
North East Catchment Management Authority	140	200	49	1
Corangamite Catchment Management Authority	128	147	62	96
Glenelg Hopkins Catchment Management Authority	128	256	58	-
East Gippsland Catchment Management Authority	106	195	46	3
West Gippsland Catchment Management Authority	96	201	48	-
Department of Jobs, Skills, Industry & Regions (formerly DJPR)	50	114	-	-
Department of Treasury and Finance (VicFleet Lease Mgt)	45	70	-	100
Goulburn Murray Water	44	-	24	33
Victorian Environmental Water Holder	26	-	-	-
North Central Catchment Management Authority	13	59	-	2
Victorian Fisheries Authority	2	68	-	-

## Notes to the financial statements for the year ended 30 June 2023

During the year, payments to government-related entities were made for contract services relating to the delivery of Goulburn Broken CMA's programs. The Authority made significant payments to the following government-related entities under normal commercial terms and conditions:

Entity	2023 Payments made (\$000)	2022 Payments made (\$000)	2023 Payable (\$000)	2022 Payable (\$000)
Goulburn Murray Water	3,012	3,342	517	627
Department of Energy, Environment and Climate Action (Formerly DELWP)	895	790	5	38
Parks Victoria	607	325	-	-
Department of Treasury & Finance	304	296	32	33
North Central Catchment Management Authority	160	80	-	-
Victorian Managed Insurance Authority (VMIA)	101	111	-	-
Trust for Nature	65	-	-	-
Victorian Environmental Water Holder	45	-	-	-
Wimmera Catchment Management Authority	33	94	-	-
Department of Jobs, Skills, Industry & Regions (formerly DJPR)	33	88	-	-

### Key management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling activities of the Authority, directly or indirectly this comprises Directors and the CEO. Key management personnel includes all Responsible persons as listed in Note 8.4.

The compensation detailed below excludes the salaries and benefits the Portfolio Minister receives. The Minister's remuneration and allowances is set by the *Parliamentary Salaries and Superannuation Act 1968* and is reported within the State's Annual Financial Report.

Remuneration comprises employee benefits in all forms of consideration paid, payable or provided by the entity, or on behalf of the entity, in exchange for services rendered, and is disclosed in the following categories.

**Short-term employee benefits** include amounts such as wages, salaries, annual leave or sick leave that are usually paid or payable on a regular basis, as well as non-monetary benefits such as allowances and free or subsidised goods or services.

**Post-employment benefits** include pensions and other retirement benefits paid or payable on a discrete basis when employment has ceased.

**Other long-term benefits** include long service leave, other long-service benefit or deferred compensation.

Compensation of KMPs	2023	2022
Short-term employee benefits	378,494	337,128
Post-employment benefits	40,350	33,006
Other long-term benefits	10,122	5,297
Total	428,966	375,431

### Transactions with key management personnel and other related parties

Given the breadth and depth of Authority activities, related parties transact with the Victorian public sector in a manner consistent with other members of the public e.g. stamp duty and other government fees and charges. Further employment of processes within the Victorian public sector occur on terms and conditions consistent with the *Public Administration Act 2004* and Codes of Conduct and Standards issued by the Victorian Public Sector Commission. Procurement processes occur on terms and conditions consistent with the Victorian Government Procurement Board requirements. Outside of normal citizen type transactions with the Authority, there were no significant related party transactions or balances that involved key management personnel, their close family members and their personal business interest.

## Notes to the financial statements for the year ended 30 June 2023

### 8.6 Remuneration of auditors

	2023 \$000	2022 \$000
Victorian Auditor-General's Office for audit of financial statements	24	24
Internal audit costs	24	25
<b>Total auditors' remuneration</b>	<b>48</b>	<b>49</b>

### 8.7 Subsequent events

No matters or circumstances have arisen since the end of the reporting period which significantly affected or may significantly affect the operations of the authority, the results of those operations, or the state of affairs of the authority in future financial years.

### 8.8 Economic dependency

Goulburn Broken CMA is dependent on the Department of Energy, Environment and Climate Action for the majority of its revenue used to operate the entity. At the date of this report, the Board of Directors has no reason to believe the Department of Energy, Environment and Climate Action will not continue to support the CMA.

### 8.9 Australian Accounting Standards issued that are not yet effective

Certain new and revised accounting standards have been issued but are not effective for the 2022-23 reporting period. These accounting standards have not been applied to the Financial Statements. The Authority is reviewing its existing policies and assessing the potential implications of these accounting standards which include:

Topic	Key requirements	Applicable for annual reporting periods beginning on or after	Estimated impact on Financial Statements
AASB 17 Insurance Contracts	<p>The new Australian standard eliminates inconsistencies and weaknesses in existing practices by providing a single principle based framework to account for all types of insurance contracts, including reissuance contract that an insurer holds. It also provides requirements for presentation and disclosure to enhance comparability between entities.</p> <p>The Australian Accounting Standards Board has currently issued an Exposure Draft (ED) 319 – Insurance Contracts in the Public Sector, proposing public-sector modifications to AASB 17 to facilitate the application by public sector entities. It is proposed that public sector entities would apply AASB 17 to annual periods beginning or after 1 July 2025, with earlier application permitted.</p>	1 Jan 2025	The Authority is in the process of analysing the impacts of this Standard. However, it is not anticipated to have a material impact. The Authority will not early adopt the Standard.

## Notes to the financial statements for the year ended 30 June 2023

Topic	Key requirements	Applicable for annual reporting periods beginning on or after	Estimated impact on Financial Statements
AASB 2022-10 Amendments to Australian Accounting Standards – Fair Value Measurement of Non-Financial Assets of Not-for-Profit Public Sector Entities	<p>AASB 2022-10 amends AASB 13 Fair Value Measurement by adding authoritative implementation guidance and illustrative examples for fair value measurements of non-financial assets of not-for-profit public sector entities not held primarily for their ability to generate net cash inflows.</p> <p>Among other things, the Standard:</p> <ul style="list-style-type: none"> <li>• specifies that an entity needs to consider whether an asset's highest and best use differs from its current use only when it is held for sale or held for distributions to owners under AASB 5 Non-current Assets Held for Sale and Discontinued Operations or if it is highly probable that it will be used for an alternative purpose;</li> <li>• clarifies that an asset's use is 'financially feasible' if market participants would be willing to invest in the asset's service capacity, considering both the capacity to provide needed goods or services and the resulting costs of those goods and services;</li> <li>• specifies that if both market selling price and some market participant data required to fair value the asset are not observable, an entity needs to start with its own assumptions and adjust them to the extent that reasonably available information indicates that other market participants would use different data; and</li> <li>• provides guidance on the application of the cost approach to fair value, including the nature of costs to be included in a reference asset and identification of economic obsolescence.</li> </ul>	1 Jan 2024	The Authority is in the process of analysing the impacts of this Standard. However, it is not anticipated to have a material impact. The Authority will not early adopt the Standard.

### 8.10 Glossary of technical terms

The following is a summary of the major technical terms used in this report.

**Actuarial gains or losses on superannuation defined benefit plans** are changes in the present value of the superannuation defined benefit liability resulting from:

- experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred)
- the effects of changes in actuarial assumptions.

**Administered item** generally refers to a Authority lacking the capacity to benefit from that item in the pursuit of the entity's objectives and to deny or regulate the access of others to that benefit.

**Amortisation** is the expense that results from the consumption, extraction or use over time of a non-produced physical or intangible asset. This expense is classified as an 'other economic flow'.

**Associates** are all entities over which an entity has significant influence but not control, generally accompanying a shareholding and voting rights of between 20 per cent and 50 per cent.

**Borrowings** refers to interest-bearing liabilities mainly raised from public borrowings raised through the Treasury Corporation of Victoria, lease liabilities, service concession arrangements and other interest-bearing arrangements. Borrowings also include non interest-bearing advances from government that are acquired for policy purposes.

**Commitments** include those operating, capital and other outsourcing commitments arising from non-cancellable contractual or statutory sources.

**Comprehensive result** is the amount included in the operating statement representing total change in net worth other than transactions with owners as owners.

**Controlled item** generally refers to the capacity of an Authority to benefit from that item in the pursuit of the entity's objectives and to deny or regulate the access of others to that benefit.

**Current grants** are amounts payable or receivable for current purposes for which no economic benefits of equal value are receivable or payable in return.

## Notes to the financial statements for the year ended 30 June 2023

**Depreciation** is an expense that arises from the consumption through wear or time of a produced physical or intangible asset. This expense is classified as a 'transaction' and so reduces the 'net result from transaction'.

**Effective interest method** is the method used to calculate the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset or, where appropriate, a shorter period.

**Employee benefits expenses** include all costs related to employment including wages and salaries, fringe benefits tax, leave entitlements, redundancy payments, defined benefits superannuation plans, and defined contribution superannuation plans.

**Ex gratia expenses** mean the voluntary payment of money or other non-monetary benefit (e.g. a write off) that is not made either to acquire goods, services or other benefits for the entity or to meet a legal liability, or to settle or resolve a possible legal liability or claim against the entity.

**Finance lease** is a lease that transfers substantially all the risks and rewards incidental to ownership of an underlying asset.

**Financial asset** is any asset that is:

- cash
- an equity instrument of another entity
  - a contractual right to receive cash or another financial asset from another entity or to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity.
- A financial asset can also be a contract that will or may be settled in the entity's own equity instruments and is either:
  - a non-derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity instruments
  - a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments.

**Financial instrument** is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

**Financial liability** is any liability that is:

- a contractual obligation to deliver cash or another financial asset to another entity or to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity
- a contract that will or may be settled in the entity's own equity instruments and is either:
  - a non-derivative for which the entity is or may be obliged to deliver a variable number of the entity's own equity instruments
  - a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments. For this purpose, the entity's own equity instruments do not include instruments that are themselves contracts for the future receipt or delivery of the entity's own equity instruments.

**Financial statements** in the Model report comprises:

- a balance sheet as at the end of the period
- a comprehensive operating statement for the period
- a statement of changes in equity for the period
- a cash flow statement for the period
- notes, comprising a summary of significant accounting policies and other explanatory information
- comparative information in respect of the preceding period as specified in paragraph 38 of AASB 101 Presentation of Financial Statements
- a statement of financial position as at the beginning of the preceding period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or when it reclassifies items in its financial statements in accordance with paragraphs 41 of AASB 101.

**Grant expenses and other transfers** are transactions in which one unit provides goods, services, assets (or extinguishes a liability) or labour to another unit without receiving approximately equal value in return. Grants can either be operating or capital in nature.

While grants to governments may result in the provision of some goods or services to the transferor, they do not give the transferor a claim to receive directly benefits of approximately equal value. For this reason, grants are referred to by the AASB as involuntary transfers and are termed non-reciprocal transfers. Receipt and sacrifice of approximately equal value may occur, but only by coincidence. For example, governments are not obliged to provide commensurate benefits, in the form of goods or services, to particular taxpayers in return for their taxes.

Grants can be paid as general-purpose grants, which refer to grants that are not subject to conditions regarding their use. Alternatively, they may be paid as specific purpose grants, which are paid for a particular purpose and/or have conditions attached regarding their use..

**General government sector** comprises all government departments, offices and other bodies engaged in providing services free of charge or at prices significantly below their cost of production. General government services include those that are mainly non-market in nature, those that are largely for collective consumption by the community and those that involve the transfer or redistribution of income. These services are financed mainly through taxes, or other compulsory levies and user charges.

## Notes to the financial statements for the year ended 30 June 2023

**Interest expense** represents costs incurred in connection with borrowings. It includes interest on advances, loans, overdrafts, bonds and bills, deposits, interest components of lease repayments, service concession financial liabilities and amortisation of discounts or premiums in relation to borrowings.

**Interest income** includes unwinding over time of discounts on financial assets and interest received on bank term deposits and other investments.

**Leases** are rights conveyed in a contract, or part of a contract, the right to use an asset (the underlying asset) for a period of time in exchange for consideration.

**Net result** is a measure of financial performance of the operations for the period. It is the net result of items of revenue, gains and expenses (including losses) recognised for the period, excluding those classified as 'other non-owner movements in equity'.

**Non-financial assets** are all assets that are not financial assets. It includes inventories, land, buildings, infrastructure, road networks, land under roads, plant and equipment, cultural and heritage assets, intangibles and biological assets such as commercial forests.

**Operating result** is a measure of financial performance of the operations for the period. It is the net result of items of revenue, gains and expenses (including losses) recognised for the period, excluding those that are classified as 'other non-owner movements in equity'. Refer also to 'net result'.

**Other economic flows included in net result** are changes in the volume or value of an asset or liability that do not result from transactions. In simple terms, other economic flows are changes arising from market remeasurements. They include gains and losses from disposals, revaluations and impairments of non-current physical and intangible assets; fair value changes of financial instruments and agricultural assets; and depletion of natural assets (non produced) from their use or removal.

**Other economic flows – other comprehensive income** comprises items (including reclassification adjustments) that are not recognised in net result as required or permitted by other Australian Accounting Standards. They include changes in physical asset revaluation surplus; share of net movement in revaluation surplus of associates and joint ventures; and gains and losses on remeasuring available-for-sale financial assets.

**Payables** includes short and long-term trade debt and accounts payable, grants, taxes and interest payable.

**Produced assets** include buildings, plant and equipment, inventories, cultivated assets and certain intangible assets. Intangible produced assets may include computer software, motion picture films and research and development costs (which does not include the start-up costs associated with capital projects).

**Receivables** include amounts owing from government through appropriation receivable, short and long-term trade credit and accounts receivable, accrued investment income, grants, taxes and interest receivable.

**Sales of goods and services** refers to income from the direct provision of goods and services and includes fees and charges for services rendered, sales of goods and services, fees from regulatory services and work done as an agent for private enterprises. It also includes rental income under leases and on produced assets such as buildings and entertainment, but excludes rent income from the use of non-produced assets such as land. User charges includes sale of goods and services income.

**Taxation** income represents income received from the State's taxpayers and includes:

- payroll tax, land tax and duties levied principally on conveyances and land transfers
- gambling taxes levied mainly on private lotteries, electronic gaming machines, casino operations and racing
- insurance duty relating to compulsory third-party, life and non-life policies
- insurance company contributions to fire brigades
- motor vehicle taxes, including registration fees and duty on registrations and transfers
- levies (including the environmental levy) on statutory corporations in other sectors of government
- other taxes, including landfill levies, licence and concession fees.

**Transactions** are those economic flows that are considered to arise as a result of policy decisions, usually an interaction between two entities by mutual agreement. They also include flows into an entity such as depreciation, where the owner is simultaneously acting as the owner of the depreciating asset and as the consumer of the service provided by the asset. Taxation is regarded as mutually agreed interactions between the government and taxpayers. Transactions can be in kind (e.g. assets provided/given free of charge or for nominal consideration) or where the final consideration is cash. In simple terms, transactions arise from the policy decisions of the Government.

# Appendix 1: Understanding progress and ratings

Compiled by Rod McLennan.

Natural Resource Management (NRM) decisions to create or respond to change are usually made in context of a complex and dynamic system of people and nature with countless relationships. The operating environment is highly integrated and changing and there are significant uncertainties in measuring natural resources and evaluating progress. Well-constructed scorecards with summary narratives are distilled evaluations that help many stakeholders make better shared choices, while promoting transparency and accountability.

## Shared mental models of progress and a desired future

### Resilience model

**Problem:** While in everyday life individuals use their own ways of viewing the state of a complex world and possible future states, sharing views (based on solid evidence) can be extremely challenging.

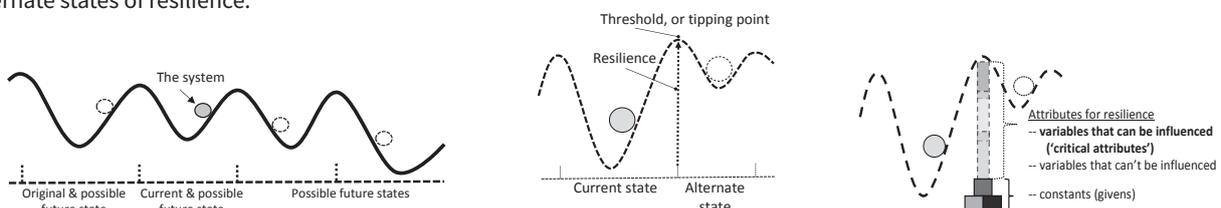
**Solution:** Goulburn Broken CMA uses a resilience model to describe the current state, identify desired long-term future states, and determine required actions.

Many of the most important elements underpinning a resilience model, such as stakeholder relationships, consideration of system tipping points, and integration across NRM themes, have been emphasised by Goulburn Broken Catchment communities since salinity management plans were founded on joint action in the late 1980s (Northage 2014). Although it was not explicitly stated and there was no roadmap to follow, resilience was pursued by these pioneers of holistic catchment management. A culture of interagency and community-government collaboration was fostered through strong and insightful leadership at all levels within Victorian government and across regional and local communities.

Technology advances have transformed how people communicate and relate. As the number of interactions escalate, relationships can be diluted. Goulburn Broken CMA continues to integrate the efforts of stakeholders to holistically manage the Catchment and has formalised use of the resilience model: it is central to the Regional Catchment Strategy 2021-2027 and its current renewal. The approach has previously emerged from Goulburn Broken CMA's sustainability and ecosystem services thinking.

Resilience is 'the ability of the Catchment's people and environment to absorb a shock or setback and to flourish in spite of it, maybe even because of it' (R.M. Williams Outback, Apr/May 2017). It does not mean 'ploughing through and doing what you have always done' (Corocher in Outback Apr/May 2017).

The resilience model can be easily shared: people can relate the model to phases and other aspects of their personal lives, such as alternate states for emotions, finances, relationships, and physical health. A 'resilience roller-coaster' shows alternate states of resilience.



The resilience model lends itself neatly to a small number of high-level choices for managing systems in the face of unforeseen and shifting circumstances: restore, persist, accept change and adapt while preparing to transform, or drive transformation.

In NRM, **system examples** include biodiversity (page 58), community (page 33), and social-ecological (page 7). High-level choices for these interconnected systems have been described as visions and long-term goals, such as 'Increase the diversity of native species and habitat structures in 50% of priority landscapes to improve vegetation quality and native fauna populations' and 'increase community capacity to be involved and act onground'

### Resilience, tipping points, risks and opportunities

**Problem:** While visions and long-term goals have been described for NRM systems for 30 years or more, it has been challenging to build the bridge (a simply understood model) between high-level intent and required short and long-term actions: the links between cause and effect are often obscure.

**Solution:** A **risk mitigation model** that considers the risk of the system being in an undesirable state in the long term (more than 10 years) focuses on problems, opportunities and evidence that are material (high consequence), helping to eliminate 'noise'. The risk mitigation model is also familiar, making the step between risk and action (and progress) easy to communicate.

Determining the **risk of the system being in an undesirable state** in the long term requires consideration of **thresholds (tipping points)**, likelihood and consequences, uncertainties with data and what desirable futures are, and risk and opportunities given both current investment (from government and other sources, including in-kind) and no investment.

Some attributes that define a system's resilience are constants that cannot be changed, such as location downstream or upstream of a significant tributary. Other attributes vary, with some that cannot be readily influenced, such as rainfall or market conditions, and others that can be influenced, such as native vegetation extent and wetland inundation.

### A critical attribute for long-term resilience is:

- critical to how the system functions
- at a level and trajectory that places the delivery of highly valued services at risk in the long term (because the system is at long-term risk of tipping into an undesirable state)
- influenced by actions that can be easily defined
- 'concrete' enough to readily convey an image or concept that is readily shared and not prone to misinterpretation
- measurable over the medium term (about 5 years), or at least enables a sense of progress to be conveyed.

**Evaluation, planning levels and decision-making cycles**

Catchment management decisions have vastly different timeframes, from daily operational decisions by extension officers to once-in-six-year strategic decisions by the Goulburn Broken CMA Board. Goulburn Broken CMA arranges data to inform three critical and connected levels of evaluation for strategic planning and implementation, as shown in the table below. While different NRM funders have

different ways of operating and different and changing data requirements, Goulburn Broken CMA orders information according to the equation:  $Outputs \times Assumptions = Outcomes$ , to document progress in implementing actions and to update understanding of progress in achieving desired long-term states of system resilience, including contributions by various partners to outcomes (including overall condition).

**Evidence for three levels of evaluation (and decision-making)**

Evaluation level	Typical key evaluation questions used to focus evaluation	Examples of evidence to inform evaluation
1 Annual performance	How did we go this year against what we said we would do?	Outputs (onground works and capacity building actions or tasks) achieved and funds spent against targets set.
2 Long-term strategy implementation progress	How have we gone against what we said we would do when we wrote the (various) strategies? How effective were the implemented measures?	Outputs and assumptions of their impact (especially on critical attributes) listed in strategies.
3 Catchment condition	What state is the system we are influencing in? What is the risk that the system will not be in the desired state in the long term? Was the original strategy appropriate? Have circumstances (such as new knowledge or different weather patterns) changed sufficiently to warrant a revised strategy? Does the investment mix need to be modified?	System state; risk trends; tipping points; indicators of resilience such as critical attribute contribution levels; responses such as restoration, prevention, maintenance, driving transformation, acceptance of change and adaptation.

**Rating progress and performance**

Details on each of the investment areas within sections of this annual report justify ratings provided. Further details are on Goulburn Broken CMA's website [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au) and in relevant RCS sub-strategies.

**Rating annual performance**

Annual performance is rated by measuring outputs achieved against annual targets. Targets are determined by funds available and are derived from the relevant long-term strategy. It is usually not known what funds are available beyond one year. There is usually a high degree of certainty in rating annual performance within a single investment area when funding is known, outputs and other indicators are well documented, and accounting mechanisms are sound.

Annual targets and achievements in this report do not include outputs delivered beyond Goulburn Broken CMA's direct control, especially by landholders who voluntarily undertake works. Data on these external outputs is also critical to inform long-term decisions and is increasingly captured. A complete list of detailed outputs is in Appendix 4 and detailed outputs are listed in sections devoted to each investment area throughout this report.

**Rating long-term progress**

Long-term progress ratings are needed for three separate areas of focus for Goulburn Broken CMA decision-making.

**1 Long-term strategy implementation stage.** Strategies vary in formality, comprehensiveness, and funds to implement them. Implementation stage considers aspects such as degree of integration with other NRM themes, involvement of stakeholders, and quantities of outputs achieved compared to desired levels.

**2 Catchment condition.** Goulburn Broken CMA chooses investment areas to frame ratings of catchment condition because they align well with how the CMA and many funders 'think' (compartmentalise NRM) and invest. From 2016-17, ratings of critical attributes' contribution level and the associated long-term risk to the desired state of resilience are explicitly listed as indicators of catchment condition (see long-term scorecards throughout this report). Other high-level indicators of condition, such as viability of threatened species and gross value of agricultural production, are also factored into ratings.

The **benchmark system state** is the desired state: this varies from many NRM assessments that use 'natural' or 'pre-European settlement' as the benchmark. To get a sense of long-term progress over a timeframe meaningful for NRM, critical attributes' contribution to system function are rated for 1990 as well as the current year.

No explicit quantitative weightings have been applied when 'rolling-up' critical attributes to arrive at the overall catchment condition for an investment area. Assessment by individual social-ecological system areas (see page 75) and subsequent rolling-up has so far only been done for the Agricultural Floodplains (see Sustainable Irrigation Program).

Structuring and communicating long-term progress are works-in-progress that try to retain the integrity of Goulburn Broken CMA's evaluation efforts over two decades while aligning with emerging national and state approaches

**3 Organisational business condition.** Goulburn Broken CMA is an important contributor to catchment condition, and several indicators are similarly rolled-up to rate condition in terms of human resources and governance (and annual performance; see pages 88 and 96).

## Appendix 2: Goulburn Broken CMA Approach to the Catchment Condition

### Summary - Statewide Standard Format

Goulburn Broken CMA reports annually on condition and management through its Annual Report. The development of Catchment Condition Reporting under the Statewide Standard Format is structured to align with the state-wide Regional Catchment Strategy outcomes framework which consists of five themes and a set of agreed indicators.

To inform this process, the Goulburn Broken CMA utilises data where possible and the expertise of technical staff. In addition, the CMA incorporates the technical knowledge of its stakeholders through its partnership engagement.

For the overall trend rating (at theme level – for the Statewide Standard Format) the ratings are weighed up across indicators within the theme with consideration to the number of ratings in each category. This process is also guided by the Long-term Scorecard.

Long-term scorecard ratings are ascertained through determining the performance, catchment condition, contribution to system function, risks to system threshold/tipping point – trend and long-term strategy maturity. See Appendix 1.

Ascertaining condition of the Goulburn Broken catchment through the Long-term scorecard is a deliberative process that is reviewed by the Goulburn Broken CMA Senior Management Team and incorporates the input from technical staff throughout the organisation, and partner organisations. The Goulburn Broken CMA Board reviews the proposed changes and recommendations within the Long-term Scorecard and provides vital input into the rating process and ultimately endorses the final version of the long-term scorecard that is included within the Annual Report.

Catchment Condition Reporting (Statewide Format) is undertaken post the development of the Long-term scorecard and is prepared with input from relevant field experts amongst Goulburn Broken CMA staff. The respective staff members consider data and assist in moderating a collective assessment.

The Catchment Condition Reporting is endorsed by the Goulburn Broken CMA Board with the Annual Report.

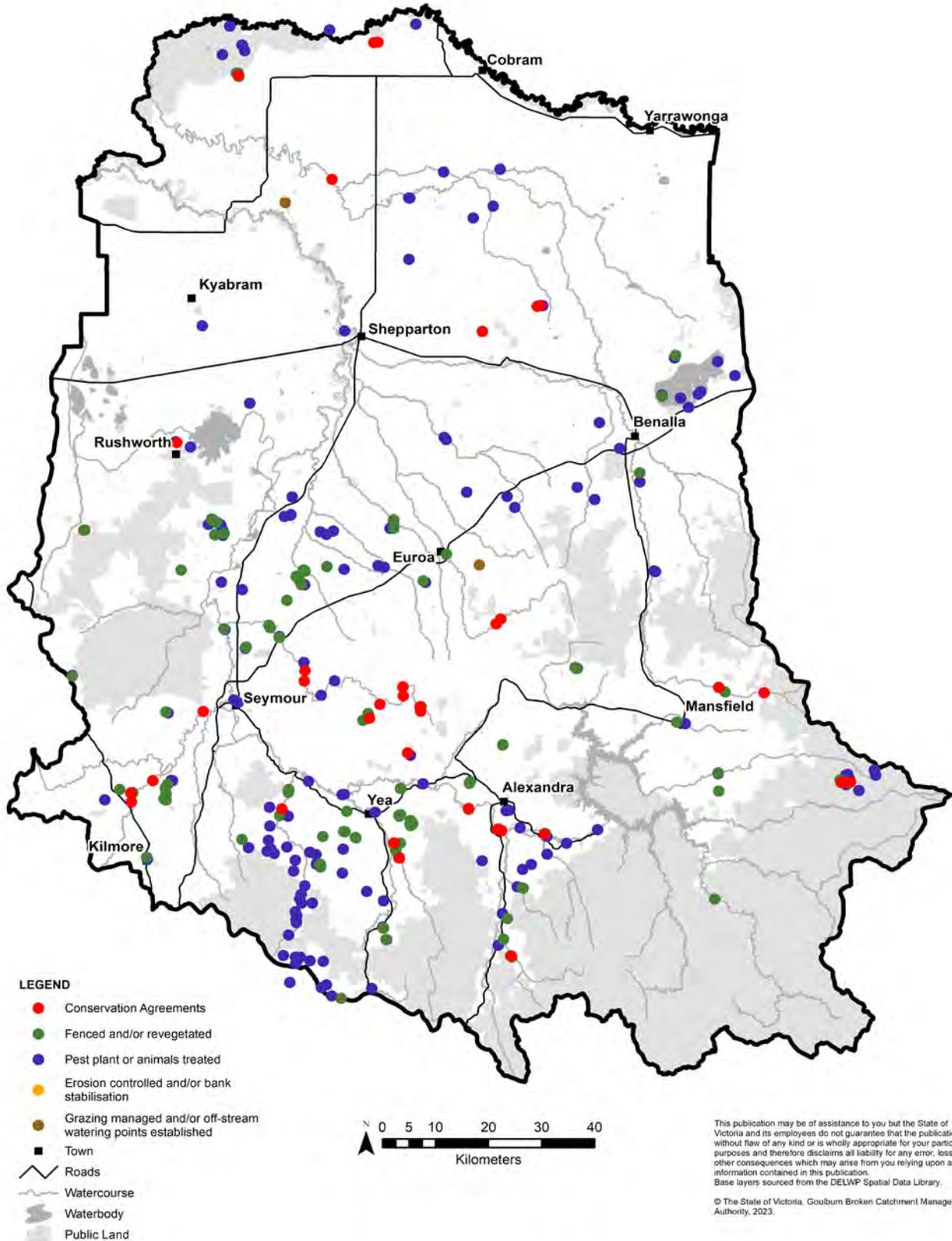
### Overview of Goulburn Broken CMA management and condition themes and indicators

Statewide Outcomes Framework Themes	Indicators used in guiding assessment pertaining to Catchment Condition – Statewide Standard Format (in conjunction with the expertise and input of staff and stakeholders/ partners)
Water	Total river inflow (mm), Wetlands fenced (ha), Environmental water used (ML), Extent of protected or improved riparian land (ha), Fence river/stream remnant (km), Off-stream watering (no.), Instream habitat (no.), River or stream bed and bank protection actions (km), Irrigation drains built (km), Irrigation systems improved (ha), Annual phosphorous loads from irrigation drains (tonnes/year), Total phosphorus loads exported from GB (tonnes/year), Reuse systems installed (no.), Stock access managed (km) and % stream length stock access managed.
Land	% exposed soils, Laser levelling (ha), Whole farm plans prepared (no.) New irrigation referrals dryland zone (no.), Improved irrigation dryland zone (no.), Annual rainfall, Progress in managing salinity impacts in SIR (ha), Soil moisture (mm), Gross value of agricultural commodities (\$).
Biodiversity	Extent of Native vegetation (ha), Area of pest herbivore and area of pest predator control (ha), Area of weed control (ha), Area of permanent protection (ha), Percentage of tree cover change, Area of revegetation (planted) (ha), Remnant veg fenced (ha).
Community	Landcare/Community NRM Groups Health Score, Investment share (%), Major contributions to NRM (\$ million), Grants to community organisations (no. projects and \$), Community volunteer contributions (hours).
Integrated Catchment Management	Reported under Community theme.

## Appendix 3: Works

1 July 2022 to 30 June 2023

This map shows onground works completed in 2022-23 through Goulburn Broken CMA programs. These works relate to outputs listed in tables throughout this Annual Report. Some major works under Waterways, Floodplain Management and Sustainable Irrigation Programs are not shown. Ongoing works that landowners fully fund themselves are not shown. Goulburn Broken CMA is investigating ways to capture such important contributions. The points indicated on this map are an approximate location of where the works occurred only.



## Appendix 4: Outputs - detailed list of achievements

Standard GB Threat or Impact Managed	Output	Land & Biodiversity		
		Target <sup>i</sup>	Achieved	% Achieved
Threat				
Land and water use practices				
Stock grazing (ha = terrestrial; km = riparian)	Fence terrestrial remnant vegetation (ha)	41	117	286
	Fence wetland remnant (ha)			
	Fence stream/river remnant (ha)			
	Fence stream/river remnant (km)			
	Off-stream watering (no.)			
	Binding Management Agreement (licence, Section 173, covenant) (ha) <sup>xvi</sup>	-	76	
Induced Threat				
Saline water & high watertables				
Surface water <sup>iii</sup>	Laser levelling (ha) <sup>ii</sup>			
	Drain – primary built (including hybrid; km) <sup>iv</sup>			
	Drain – community built (km)			
	Weir – replace (no.)			
	Farm reuse systems installed (no.) <sup>v</sup>			
	Drain – additional water diverted from regional drains (ML)			
	Irrigation systems – improved (ha) <sup>vi</sup>			
	Pasture – plant (ha)			
Sub-surface water	Groundwater pumps - public installed (new; no.)			
	Groundwater pumps - private installed (new; no.)			
	Volume water pumped - increase (ML)			
	Tile drains – install (ha)			
	Revegetation - plantation / farm forestry (ha)			
Nutrient-rich & turbid water & suspended solids	Waste water treatment plants - install (no.)			
	Stormwater management projects (no.) <sup>vii</sup>			
Instream and near-stream erosion	Bed and bank protection actions (km) <sup>viii</sup>			
	Instream & tributary erosion controlled (km)			
Changed flow pattern	Environmental water use (ML) <sup>ix</sup>			
	Weeds – woody weed management (ha)	3,886	4,006	103
Weed invasion	Weeds – aquatic weeds controlled/eradicated (km)			
	Targeted infestations of weeds in high priority areas covered by control programs (ha) <sup>x</sup>	4,051	4,365	108
Pest animals	Pest animal control (ha) <sup>xi</sup>	84,828	98,458	116
Impact				
Habitat loss - terrestrial	Revegetation - plant natives within or next to remnants (ha) <sup>xii</sup>	202	505	251
	Revegetation - plant natives away from remnants (ha)			
	Fish release (no.)			
	Vertical slot fishway (no.)			
Habitat loss – instream	Rock ramp fishway (no.)			
	Fish barrier removal (no.)			
	Instream habitat (no.) <sup>xiii</sup>			
Habitat loss – wetlands	Reinstate flood regime (ML) <sup>xiv</sup>			
	Construct new wetland (ha)			
Habitat loss – threatened species	Threatened Species Recovery Plan and Action Statements (no. projects)			
Planning	Whole farm plans (no.) <sup>xv</sup>			

i Targets are determined by considering levels of government funding as listed in the Corporate Plan and any subsequent adjustments over the financial year.

ii Assumptions: 2014-15, 2015-16, 2016-17 & 2017-18 = Farm Water Program's SIR onground achievements (478, 1,963, 360 & 1,734) + 60 per cent of area put under Whole Farm Plans [new (4,143, 2,576, 3,289 & 2,843) + modernised (2,572, 2,037, 3,905 & 2,632) - Farm Water Program's SIR onground achievements (478, 1,963, 360 & 1,734)]. Assumption change from 2018-19 is 50 per cent of area put under Whole Farm Plans (not 60). 20-21 Target = 50 per cent of area to be put under Whole Farm Plans [no. (15) x average area of Whole Farm Plans (91)].

iii Surface water management enables the removal of excess rainfall runoff from irrigated lands, alleviating soil salinity. As part of an overall management plan for nutrients, nutrients loads are managed by collecting and reusing water from drains. Nutrient loads are monitored against the Goulburn Broken Water Quality Strategy nutrient target for drains.

iv Fencing and laneways are relocated along primary drains to control stock. Drains are also hydro-mulched and seeded to provide vegetative cover on bare batters

v Reuse dams allow for the collection of high nutrient runoff and re-irrigation, reducing the water and nutrient loads leaving the farm. Figures include Farm Water Program installations. In 2014-15 the number of new farm reuse systems installed is assumed to be: 67 per cent of projects install a new system and 33 per cent reconnect the project area to an existing system.

vi Assumptions: From 2014-15, area improved = laser levelling (which itself includes an assumption based on whole farm plan area - see footnote iii) + pressurised irrigation systems (micro or drip + irrigation); In 2019-20, area improved included 210 hectares of soil moisture monitoring and 2020-21 included 1,033ha.

vii Stormwater management projects are undertaken on a one-to-one funding basis with local government.

viii From 2013-14, the actions for erosion control have been bundled with this to make the tally.

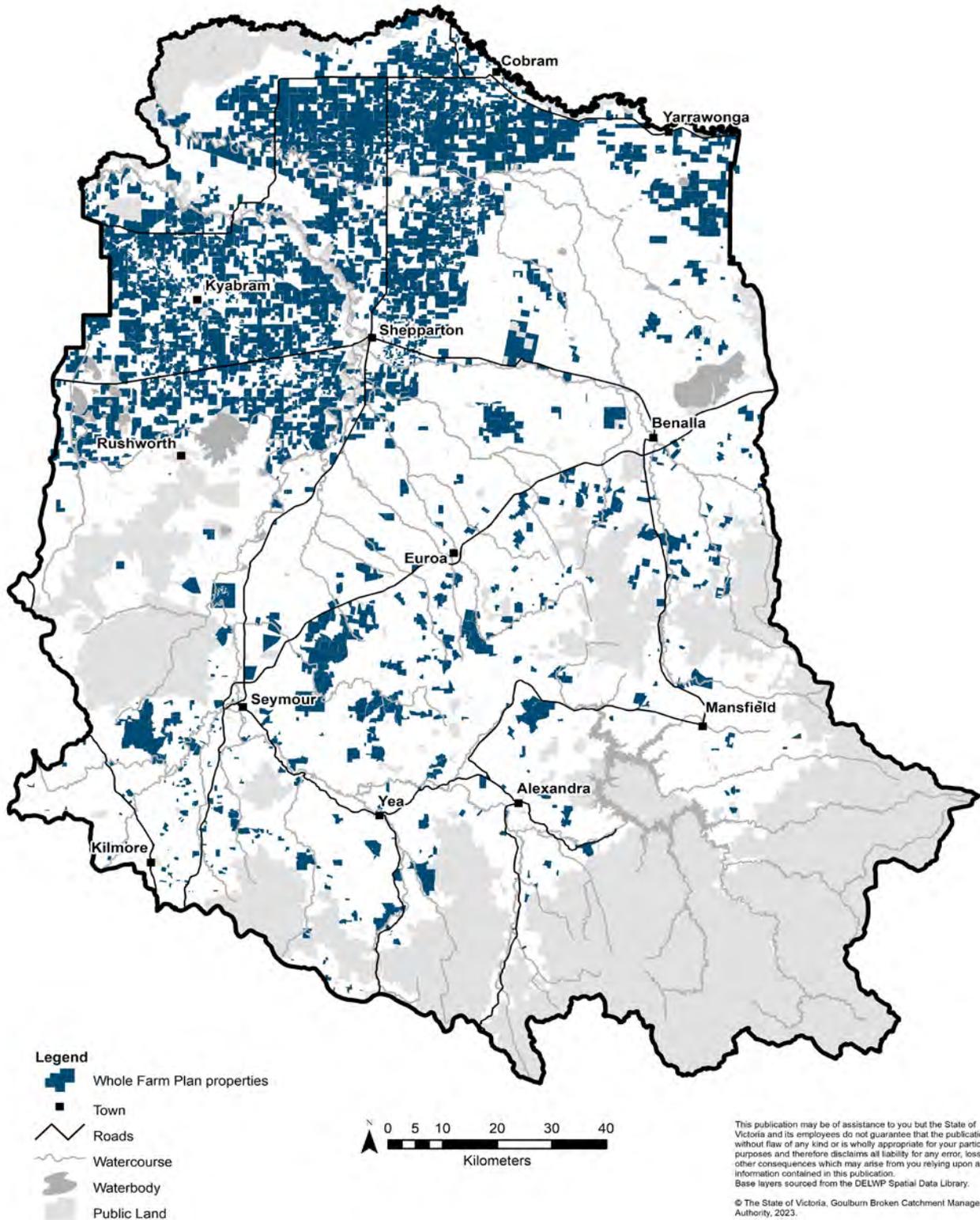
ix Target cannot be set with any confidence because achievement is prone to extreme variation, being affected by climatic and seasonal conditions. Volumes used since 2000-01 were reconciled in 2014 and some figures were adjusted. The NSW component of water delivered to Barmah Forest is included in these figures.



## Appendix 5: Properties covered by a whole farm plan

to 30 June 2023

This map shows the properties covered by a whole farm plan or modernised whole farm plan completed since the start of the Program.



## Appendix 6: Major Strategic References

### Legislation

#### Australian legislation

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*Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

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*Age Discrimination Act 2004*

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*Australian Heritage Commission Act 1975 (Register of the National Estate)*

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*Disability Discrimination Act 1992*

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*Environment Protection and Biodiversity Conservation Act 1999*

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*Native Title Act 1993*

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*Racial Discrimination Act 1975*

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*Sex Discrimination Act 1984*

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*Water Act 2007*

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*Water Amendment Act 2008*

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#### Victorian legislation

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*Aboriginal Heritage Act 2006*

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*Aboriginal Heritage Regulations 2007*

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*Aboriginal Heritage Regulations 2018*

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*Alpine Resorts (Management) Act 1997*

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*Building Regulations 1996*

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*Catchment and Land Protection Act 1994*

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*Charter of Human Rights and Responsibilities Act 2006*

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*Climate Change Act 2010*

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*Conservation, Forests and Lands Act 1987*

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*Crown Land (Reserves) Act 1978*

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*Environment Protection Act 2017*

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*Environment Protection Amendment Act 2018*

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*Environment Protection Amendment Act 2019*

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*Equal Opportunity Act 2010*

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*Financial Management Act 1994*

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*Fisheries Act 1995*

---

*Flora and Fauna Guarantee Act 1988*

---

*Flora and Fauna Guarantee Amendment Act 2019*

---

*Forests Act 1958*

---

*Fair Work Act 2009*

---

*Gender Equality Act 2020*

---

*Heritage Rivers Act 1992*

---

*Land Act 1958*

---

*Mineral Resources (Sustainable Development) Act 1990*

---

*Murray-Darling Basin Act 1993*

---

*National Parks Act 1975*

---

*Occupational Health and Safety Act 2004*

---

*Parks Victoria Act 1998*

---

*Privacy and Data Protection Act 2014*

---

---

*Planning and Environment Act 1987*

---

*Public Administration Act 2004*

---

*Public Interest Disclosures Act 2012*

---

*Reference Areas Act 1978*

---

*State Environment Protection Policy (Groundwaters of Victoria)*

---

*State Environment Protection Policy (Waters of Victoria)*

---

*Subdivision Act 1988*

---

*Sustainable Forests (Timber) Act 2004*

---

*Traditional Owner Settlement Act 2010*

---

*Victorian Conservation Trust Act 1972*

---

*Victorian Environment Assessment Council Act 2001*

---

*Victoria's Climate Change Act 2017*

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*Victorian Equal Opportunity and Human Rights Act*

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*Water Act 1989*

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*Wildlife Act 1975 (under review)*

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*Workplace Injury Rehabilitation and Compensation Act 2013*

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*Yorta Yorta Cooperative Management Agreement 2004*

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## Relevant Policies, Strategies and Agreements

### International

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China Australia Migratory Bird Agreement 1986
Convention of Migratory Species (Bomm Convention) 1979
Greenhouse Gas Protocol ( <a href="http://www.ghgprotocol.org">www.ghgprotocol.org</a> )
Japan Australia Migratory Bird Agreement 1974
The Paris Agreement 2016
Ramsar Convention on Wetlands 1971

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Republic of Korea Australia Migratory Bird Agreement 2009
UN Declaration on the rights of Indigenous Peoples 2007
UN Framework Convention on Climate Change 1994
UN Sustainable Development Goals 2015

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### Australia

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A Directory of Important Wetlands in Australia (2005)
A Framework for Determining Commonwealth Environmental Watering Actions 2009
Agricultural Competitiveness White Paper (2015)
Australia's Strategy for Nature 2019-2030
Australia's Native Vegetation Framework 2012
Australian Government Indigenous Advancement Strategy 2014
Australian Pest Animal Strategy 2017-2027
Australian Weed Strategy 2017- 2027
Barmah-Millewa Forest Environmental Water Management Plan 2012
Basin Salinity Management Strategy 2030 (2001-2015)
Drought Resilience Funding Plan 2020 to 2024
Empowered Communities: Empowered Peoples – Design report (2015)
<i>Flora and Fauna Guarantee Act 1998 - Threatened List 2023</i>
The Living Murray First Step Decision (2003)
Murray-Darling Basin Plan 2012
Murray-Darling Native Fish Management Strategy 2004

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National Agreement on Closing the Gap 2020
National Climate Resilience and Adaptation Strategy 2021-2025
National Framework for the Management and Monitoring of Australia's Native Vegetation (2001)
National Greenhouse Accounts Factors – Department of Climate Change and Energy Efficiency
National Indigenous Reform Agreement (Closing the Gap)
National Soil Strategy 2021
National Water Quality Management Strategy (ARMCANZ and ANZECC 1992)
Public Entity Executive Remuneration Policy
Reconciliation Australia – Economic Benefits of closing the gap in Indigenous employment outcomes (2014)
Strategy for Australia's National Reserve System 2009–2030
The Clean Energy Future Initiative (2012)
Threatened Species Strategy 2021-2031
Wetlands Policy of the Commonwealth Government of Australia 1997
<a href="http://www.thelivingmurray.gov.au">www.thelivingmurray.gov.au</a>

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### Victoria

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Aboriginal Participation Guidelines for Victorian Catchment Management Authorities 2015 and Implementation Plan 2016
Advisory lists of rare and threatened species in Victoria
Alpine Resorts Strategic Plan 2020-2025
Biosecurity Victoria Strategic Plan for Victoria 2009
Community Engagement and Partnerships Framework for Victoria's Catchment Management Authorities 2013 and Toolkit 2017
DEECA Guide to Good Governance – board members
Food & Fibre Strategy 2016
Indigenous Partnership Framework 2007-10 (reviewed 2010)
Invasive Plants and Animal Policy Framework 2010
Landcare Victoria Strategic Plan 2021-2024
Native Vegetation Net gain accounting first approximation report 2008 (DSE)

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The Natural Environment Climate Change Adaptation Action Plan 2022-26
Our Catchments, Our Communities – Integrated Catchment Management in Victoria 2016-19
Guidelines for the removal, destruction or lopping of native vegetation (2017)
Policy for Sustainable Recreation and Tourism on Victoria's Public Land 2002
Protecting Victoria's Environment – Biodiversity 2037 (2017)
Pupangarli Marnmarnepu 'Owning Our Future' Aboriginal Self-Determination Reform Strategy 2020-25
Regional Riparian Action Plan (2015)
Soil Health Strategy 2012
Strong, innovative, sustainable: a new strategy for agriculture in Victoria 2020-2030
Sustainability Charter for Victoria's State Forests 2006

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## Appendix 5: Major Strategic References (continued)

### Relevant Policies, Strategies and Agreements (continued)

#### Victoria (continued)

Traditional Owner Game Management Strategy 2021 and Implementation Plan 2022-2027

Threatened Species Recovery Plans

Trust for Nature's Statewide Conservation Plan 2021-2030

Victoria's Nature based Tourism Strategy 2008–2012

Victoria's Salinity Management Framework 2000

Victorian Bushfire Strategy 2008

Victorian Bushfires Royal Commission 2009

Victorian Climate Change Adaptation Action Plan 2022-2026

Victoria's Climate Change Strategy 2021

Victorian Climate Change Framework 2016

Victorian Floodplain Management Strategy 2016

Victorian Forestry Plan

Victorian Irrigation Drainage Program – Strategic Directions 2021-2024

Victorian Landcare Program

Victorian Planning Provisions

Victorian Protective Data Security Standards 2018

Victorian Traditional Owner Cultural Fire Strategy 2020

Victorian Traditional Owner Cultural Landscapes Strategy 2021

Victorian Traditional Owner Game Management Strategy 2021

Victorians Volunteering for Nature – Environmental Volunteering Plan 2018

Victorian Waterway Management Strategy 2013

Water for Victoria – Water Plan (2016)

Water is Life - Traditional Owner Access to Water Roadmap 2022

#### Regional

Barmah Strategic Action Plan

Climate Change Adaptation Plan for Natural Resource Management in the Goulburn Broken Catchment 2016

Council Plans

Environmental Water management Plans

Goulburn Broken Biodiversity Strategy 2016-2021

Goulburn Broken Biosecurity, Invasive Plants and Animal Strategy 2019-2025

Goulburn Broken Catchment Partnership Agreement 2023-2027

Goulburn Broken Climate Change Integration Strategy 2012

Goulburn Broken CMA Climate Change position paper 2007

Goulburn Broken CMA Organisational Environment Policy 2022

Goulburn Broken CMA Diversity & Inclusion Plan 2017-2022

Goulburn Broken Communication, Community Engagement and Partnership Strategy 2022-2027

Goulburn Broken Community NRM Action Plan 2020-2025

Goulburn Broken Corporate Plan 2022-23 to 2026-27

Goulburn Broken Dryland Salinity Management Plan 1990 (and reviews 1995, 2001, 2008)

Goulburn Broken Land Health Statement 2014

Goulburn Broken Indigenous Participation Plan 2021

Goulburn Broken Integrated Water Management Forum – Goulburn Broken Strategic Directions Statement 2018

Goulburn Broken Land Health Strategy 2017-2020

Goulburn Broken Regional Catchment Strategy 2021-2027

Goulburn Broken Regional Floodplain Management Strategy 2018-2028

Goulburn Broken Strategic Directions Statement 2018

Goulburn Broken Water Quality Strategy 1996-2016

Goulburn Broken Water Quality Strategy Review 2017

Goulburn Broken Waterway Strategy 2014-2022

Goulburn Broken CMA Our People - Workforce Strategy 2022-2027

Goulburn to Murray Trade Review – Final Report and Recommendations June 2022

Goulburn Murray Resilience Strategy 2020

Hume Regional Growth Plan (2014)

Hume Regional Climate Change Adaptation Strategy (2021)

Hume Strategy for Sustainable Communities (2010-2020)

Joint Management Plan for Barmah National Park 2020

Monitoring Evaluation and Reporting Strategy for the Goulburn Broken Catchment 2004

Municipal Planning Schemes

Northern Region Sustainable Water Strategy 2009

Parks Victoria's Conservation Action Plans

Protection of floodplain marshes in Barmah National Park and Barmah Forest Ramsar site 2020

Ready for Change – Evaluation Strategy for the Goulburn Broken Catchment 2017-2022

Recognition and Settlement Agreement (Taungurung Land and Waters Council and Victorian Government)

RiverConnect 2023-2028

River Red Gum Parks Management Plan 2018

Shepparton Irrigation Region Land and Water Management Plan 1990-2020 (under review)

Taungurung Country Plan 2016

Taungurung Cultural Land Management Strategy 2023

Various Memoranda of Understanding

Yorta Yorta Cooperative Management Agreement 2004

Yorta Yorta Nation Whole-of-Country Plan 2021-2030

Yorta Yorta Traditional Land Management Agreement 2010

## Appendix 7: Roles of Catchment Partners

Catchment partners	Examples	Role
Community groups, networks and non-government organisations	Environmental and agricultural groups, networks and organisations such as Landcare, Conservation Management Networks, Friends of Groups, Riverine Plains Inc., Best Wool, Best Lamb groups, Better Beef groups, Irrigated Cropping Council, Victorian No-Till Farmers Association, Water-trust Australia, Murray Darling Wetland Working Group and philanthropic bodies.	The Catchment's 100 plus environmental and agricultural groups and non-government organisations mobilise community involvement, attract corporate, philanthropic and government funding, and influence and implementation of onground works.
Traditional Owners	Taungurung Land and Waters Council and Yorta Yorta Nation Aboriginal Corporation.	Traditional Owners are custodians of traditional ecological knowledge and cultural heritage across the catchment. They have a key role in Natural Resource Management and planning, including protection and enhancement of cultural values and integrating perspectives, knowledge and cultural management practices.
Private land managers	Farmers, lifestyle landholders and corporations.	With more than two thirds of the Catchment's landscapes owned privately, landholders invest significant resources (time, money and land) into natural resource management and sustainable farm practices.
Victorian Government, agencies and statutory authorities	Parks Victoria, Dept. of Energy, Environment & Climate Action, Agriculture Victoria, Regional Development Victoria, Water Corporations, Victorian Environmental Water Holder, Environmental Protection Authority, Trust for Nature, Country Fire Authority and State Emergency Service.	The government funds and/or influences many natural resource management activities in the Catchment. They are guided by a range of policies and legislation and frequently delivered in partnership with other agencies and statutory authorities.  In addition, Goulburn Broken CMA is responsible for coordinating the collaborative implementation of the Goulburn Broken RCS, with different groups and organisations taking leadership roles for components of the strategy.
Australian Government and agencies	Murray-Darling Basin Authority, Commonwealth Environmental Water Office, Dept. of Agriculture, Fisheries & Forestry and Dept. of Climate Change, Energy, the Environment & Water, and the Department of Defence (Puckapunyal Military Area).	The government funds a significant number of natural resource management projects in the Catchment through the National Landcare Program. It also guides efforts around environmental protection and conservation of biodiversity, natural, built and cultural heritage, environmental research, water policy and resources and large-scale natural disaster recovery.
Local Government	Benalla Rural City Council, Campaspe Shire Council, Greater Shepparton City Council, Moira Shire Council, Mansfield Shire Council, Mitchell Shire Council, Murrindindi Shire Council and Strathbogie Shire Council.	In terms of Natural Resource Management (NRM), councils enforce state and local laws relating to land use planning, environmental protection, public health and animal management. They maintain significant infrastructure and play an important role in local NRM engagement, education and delivery (for example, local area plans).
Education and research	Government research institutes (for example, Arthur Rylah Institute), universities and schools.	Education and research bodies support delivery, monitoring and evaluation of natural resource management.
Industry groups	Fruit Growers Victoria, Murray Dairy, Victorian Farmers Federation, Grains Research and Development Corporation, Horticulture Innovation Australia and Meat and Livestock Australia.	Industry groups strongly influence natural resource management through their networks and advisory roles with land managers and government.
Recreational users	Fishing, birding, four-wheel driving and boating groups.	Recreational users are diverse interest groups which don't necessarily live in the catchment but regularly visit and use the catchment's natural resources. Some groups have significant political influence on government policies and legislation.

## Appendix 8: Community grants

Below is a list of grants paid to community groups and organisations for projects during the 2022-23 financial year. Payments made to Traditional owner groups are done on a works basis and may be across more than one funding source.

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Australian Government - Regional Land Partnerships Program</b>	
The Regional Land Partnerships component of the Australian Government's National Landcare Program Phase Two will deliver \$450 million dollars over five years Australia-wide to deliver national priorities at a regional and local level, supporting vital onground environment and agricultural projects across the country that offer benefits to our environment, our farms, and our communities.	
<b>Euroa Arboretum Inc.</b>	
Buxton Gum Revival	\$5,380
Linking Landscapes and Communities	\$65,301
<b>Gecko CLaN Inc.</b>	
Linking Landscapes and Communities	\$21,005
<b>Goulburn Murray Landcare Network Inc.</b>	
Floodplain Ecology Course	\$10,000
Growing Regenerative Farming Systems	\$21,500
Linking Landscapes and Communities	\$52,850
<b>Greta Valley Landcare Group</b>	
Putting our heads together: Collaboration and knowledge sharing across the Catchments	\$4,250
<b>Hughes Creek Catchment Collaborative Inc.</b>	
Assessment and modelling of Soil Carbon profiles in the Hughes Creek catchment	\$13,900
<b>Irrigated Cropping Council Inc.</b>	
Increasing soil carbon to ameliorate compaction in irrigated soils	\$26,500
<b>Longwood Plains Conservation Management Network Inc</b>	
Linking Landscapes and Communities	\$34,900
<b>Regent Honeyeater Project Inc.</b>	
Linking Landscapes and Communities	\$209,760
<b>Riverine Plains Inc.</b>	
Evaluating plant-based opportunities to increase soil carbon in cropping systems	\$12,500
<b>South West Goulburn Landcare Inc</b>	
Linking Landscapes and Communities	\$29,400
Validating grazing effects on soil nutrients on farms	\$20,450
<b>Strathbogie Ranges Conservation Management Network</b>	
Community engagement for Regional Agriculture Landcare Facilitator	\$6,000
From the Ground Up	\$10,000

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Taungurung Land and Waters Council</b>	
Community engagement for Regional Agriculture Landcare Facilitator	\$1,507
Linking Landscapes and Communities	\$125,363
Mending Mountains for the Pygmy Possum	\$64,830
<b>The Maize Association of Australia Inc.</b>	
Managing sub-surface irrigation impacts on soil acidity	\$11,750
<b>Trust for Nature</b>	
Linking Landscapes and Communities	\$65,000
<b>UP2US Landcare Alliance</b>	
Inspiring small farms to grow big ideas	\$15,000
<b>Upper Goulburn Landcare Network</b>	
Growing Regenerative Farming Systems	\$23,250
Linking Landscapes and Communities	\$9,100
<b>Victorian No Till Farmers Association</b>	
Farmers Helping Farmers	\$11,000
<b>Yorta Yorta Nation Aboriginal Corporation</b>	
Linking Landscapes and Communities	\$128,600
<b>Australian Government - Other</b>	
The Australian Government provides opportunities for investment in activities that help protect, enhance and strengthen the resilience of our quality built and natural environments, assets and resources.	
<b>Euroa Arboretum Inc.</b>	
Swift Parrot Pantry	\$10,732
<b>Taungurung Land and Waters Council</b>	
Swift Parrot Pantry	\$19,502
<b>Yorta Yorta Nation Aboriginal Corporation</b>	
Lower Broken Creek Habitat Pools	\$1,400
Swift Parrot Pantry	\$23,937

## Appendix 8: Community grants (continued)

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Victorian Government - Victorian Landcare Grants</b>	
The Victorian Government through Victorian Landcare Grants provides funding to the Goulburn Broken CMA to support Landcare and other community-based natural resource management groups to protect and restore the Victorian landscape.	
<b>Cathedral Landcare Group</b>	
Maintenance Grants	\$500
<b>Congupna Tallygaroopna Landcare Group</b>	
Maintenance Grants	\$500
<b>Dabyminga Catchment Cooperative</b>	
Maintenance Grants	\$500
<b>Echuca Moama Landcare Group</b>	
Giving Native Plants Freedom to Grow	\$2,750
<b>Euroa Arboretum Inc.</b>	
Getting Kids into Nature	\$8,950
Wicking beds for seed production	\$7,950
<b>Flowerdale Landcare Inc</b>	
Maintenance Grants	\$500
<b>Gecko CLaN Inc.</b>	
Burnt Creek Landcare Engaging with old and new members	\$4,250
Linking new landholders to local Landcare	\$7,000
<b>Girgarre Stanhope Land Protection Group</b>	
Maintenance Grants	\$500
<b>Glenaroua Land Management Group</b>	
Maintenance Grants	\$500
<b>Goomalibee Landcare Group</b>	
Farm Safety and Weeds, Field days and Workshops	\$3,750
<b>Home Creek Spring Creek Landcare Group</b>	
Maintenance Grants	\$500
<b>Hughes Creek Catchment Collaborative Inc.</b>	
Moving to Zero Emission Cattle and Sheep Farming	\$5,600
<b>Kinglake Ranges Neighbourhood House Inc.</b>	
Maintenance Grants	\$500
<b>Kinglake Scouts Junior Landcare Group</b>	
Maintenance Grants	\$500
<b>Koyuga Kanyapella Landcare Group</b>	
Maintenance Grants	\$500
<b>Kyabram Urban Landcare Group</b>	
Maintenance Grants	\$500

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Longwood Plains Conservation Management Network Inc</b>	
Maintenance Grants	\$500
<b>Merton Landcare Group Inc.</b>	
Maintenance Grants	\$500
<b>Muckatah Landcare Group</b>	
Maintenance Grants	\$1,000
<b>Nanneella Timmering Landcare Group</b>	
Maintenance Grants	\$500
<b>Nulla Vale Pyalong West Landcare Group</b>	
Maintenance Grants	\$500
<b>South West Goulburn Landcare Inc</b>	
Paddock Trees of the Future	\$10,413
<b>Strathbogie Ranges Conservation Management Network</b>	
Fourth Festival of Fungus	\$10,000
<b>Strathbogie Tableland Landcare Group</b>	
Identification and control of weeds in inaccessible locations on the Strathbogie Tableland	\$2,728
<b>Sunday Creek Dry Creek Landcare Group</b>	
Maintenance Grants	\$1,000
<b>Swanpool &amp; District Land Protection Group Inc.</b>	
Engaging new landholders in the Swanpool District	\$3,500
<b>UP2US Landcare Alliance</b>	
Learning with Landcare Volunteer program	\$9,000
Mansfield's War on Weeds III	\$10,000
Mansfield's Web of Life	\$10,000
<b>Upper Goulburn Landcare Network</b>	
Biodiversity and Climate Change Adaptation Project	\$7,500
Controlling pest plants and animals in the Murrindindi Shire	\$7,500
Environmental education for schools and community	\$7,140
<b>UT Creek Maintongoon Landcare Group</b>	
Maintenance Grants	\$500
<b>Waranga Catchment Landcare Collective</b>	
Maintenance Grants	\$500
<b>Warby Range Landcare Group</b>	
Maintenance Grants	\$500
<b>Warrenbayne Boho Land Protection Group Inc</b>	
Maintenance Grants	\$500

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Whroo Goldfields Conservation Network</b>	
Maintenance Grants	\$500
<b>Willowmavin Landcare Group</b>	
Maintenance Grants	\$500
<b>Wyuna Landcare Group Inc</b>	
Maintenance Grants	\$500
<b>Yellow Creek Dairy Creek Landcare Inc</b>	
Dairy Creek Gorse Control	\$2,875
<b>Victorian Government - Victorian Water Programs Investment Framework</b>	
The VWPIF supports an integrated approach to water investment in Victorian catchment regions to improve the health of Victoria's catchments and waterways through effective and efficient integrated catchment management.	
<b>Committee for Greater Shepparton</b>	
Membership	\$2,000
<b>Euroa Arboretum Inc.</b>	
Plant propagation	\$6,441
<b>Greater Shepparton City Council</b>	
RiverConnect Project	\$106,301
<b>Strathbogie Ranges Conservation Management Network</b>	
Community engagement for Taking Care of Country	\$2,500
Fingers on the Pulse - Tracking the impact of climate change on the health of ecosystems in the Strathbogie Ranges	\$15,000
<b>Taungurung Land and Waters Council</b>	
'Waring' – The Goulburn Flagship project	\$1,599
Building relationships to heal Country at Molesworth Billabongs	\$22,500
Onground works	\$36,423
Taking Care of Country	\$61,742
<b>UP2US Landcare Alliance</b>	
Taking Care of Country	\$5,860
<b>Winton Wetlands Committee of Management Inc</b>	
Enhancing captive breeding for the reintroduction of Growling Grass Frogs to the Goulburn Broken Catchment	\$9,500
<b>Yorta Yorta Nation Aboriginal Corporation</b>	
Taking Care of Country	\$43,657

Total grants paid to community groups and other organisations 2022-23	Amount paid \$ (ex GST)
<b>Victorian Government - Other</b>	
The Victorian Government provides opportunities for investment in activities that help protect, enhance and strengthen the resilience of our quality built and natural environments, assets and resources.	
<b>Euroa Arboretum Inc.</b>	
Growing the future in the Goulburn Broken	\$20,000
<b>Taungurung Land and Waters Council</b>	
Flood Recovery River Health	\$14,313
Horseshoe Lagoon Environmental Water Pumping	\$25,583
Southern Pygmy Perch conservation stocking	\$38,798
<b>Yorta Yorta Nation Aboriginal Corporation</b>	
The Living Murray 2022-23	\$3,862
<b>Grand Total</b>	<b>\$1,604,652</b>

## Appendix 9: RCS sub strategies progress

Plan or strategy - overview of purpose	Timeframe	Status and further details
<b>Community and Environment sub-strategies</b>		
<p><b>Biodiversity Strategy for the Goulburn Broken Catchment</b></p> <p>The Biodiversity Strategy for the Goulburn Broken Catchment 2016-2021 builds on three previous versions prepared over the past 20 years. This 2016 version factors in reviews of previous strategies, current regional drivers of change, and regional, Victorian and Australian government policies and strategies. The strategy identifies initiatives under five-year strategic directions for achieving a 15-year vision.</p>	2016-2021	<p>Strategy not to be renewed as details captured in RCS.</p> <p>A program plan to be developed.</p> <p>See Biodiversity page 58.</p>
<p><b>Land Health Strategy</b></p> <p>The Land Health Strategy 2017-2020 defines land health and outlines strategic priorities and associated actions to guide land health activities that contribute to selected strategic priorities of the RCS.</p>	2017-2020	<p>Strategy not to be renewed as details captured in RCS.</p> <p>A program plan to be developed</p> <p>See Land page 67.</p>
<p><b>Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy</b></p> <p>Prevention and eradication of new incursions remains the highest priority and additional effort is being invested into coordinating community projects that target established species ensuring high levels of stakeholder participation.</p>	2019-2025	<p>Implementation phase</p> <p>See Land page 67.</p>
<p><b>Shepparton Irrigation Region (Agricultural Floodplains) Land and Water Management Plan</b></p> <p>The Shepparton Irrigation Region community leads Australia in producing food in harmony with the environment. The purpose of the plan is to support and grow the natural base that is vital for agriculture, biodiversity and people to jointly flourish. The purpose will be achieved by realising long-term goals for five critical regional attributes: water availability, water quality, watertables, native vegetation extent, and farm and food processor viability.</p>	1990-2020 (latest update 2016)	<p>Renewal of the plan underway.</p> <p>See Sustainable irrigation page 75.</p>
<p><b>Goulburn Broken Waterway Strategy</b></p> <p>This Strategy presents an integrated catchment planning framework for waterways (including wetlands) in the Goulburn Broken region and is the primary guide for priority setting, maintenance and improvements in our waterways.</p>	2014-2022	<p>Final review completed. Renewal of strategy to be completed in 2024.</p> <p>See Waterways page 38.</p>
<p><b>Goulburn Broken Regional Floodplain Management Strategy</b></p> <p>The Strategy built on the previous strategies and provides a single, regional planning document for floodplain management and a high-level regional work plan to guide future investment priorities. The Regional Floodplain Strategy aligns with the vision and priorities of the Regional Catchment Strategy and the Regional Waterway Strategy.</p>	2018-2028	<p>Implementation phase</p> <p>Currently conducting mid-term review.</p> <p>See Floodplain page 52.</p>
<b>Integrated Local Plans</b>		
<p><b>SES Local Area Plans (Agricultural Floodplains, Commuting Hills, Upland Slopes, Southern Forests and Productive Plains)</b></p> <p>Local Area Plans have been developed to communicate the priorities – and actions - for supporting the local community as it responds to changes in land use, water policy reform, and climate and farm productivity.</p> <p>Local Plans have been developed for each SES as we recognise the people living and working in each SES are best placed to priorities the activities needed to build the resilience of the region's critical ecosystem services (such as productive soils, clean air, high quality water). These local actions contribute to the success of Catchment-wide efforts to respond to issues such as fire, flood, drought and changes in land use.</p> <p>These plans are available on WeConnect (<a href="http://weconnect.gbcma.vic.gov.au">http://weconnect.gbcma.vic.gov.au</a>).</p>	2021-2027 (in-line with the RCS)	Implementation phase
<b>Organisation's business sub-strategies</b>		
<p><b>Corporate plan</b></p> <p>Communicate a clear picture of success to investors (the government) and hence the value to the Victorian community requires:</p> <ul style="list-style-type: none"> <li>• an unbroken line of sight between the regional vision for the plan period and output delivery;</li> <li>• clearly articulating the plan with a compelling and simple narrative; and</li> <li>• transparent performance measures.</li> </ul> <p>In accordance with section 19D of the <i>CaLP Act</i>, a CMA's corporate plan should cover a five-year period, which is intended to ensure an integrated and strategic approach over an extended period. However, the financial statements are required to cover a three-year period.</p>	Annually	<p>Annual renewal.</p> <p>Corporate Plan 2022-23 to 2026-27 has been developed and designed to make it more accessible to and interpreted by a wider audience.</p> <p>See progress report page 30.</p>

<b>Plan or strategy - overview of purpose</b>	<b>Timeframe</b>	<b>Status and further details</b>
<p><b>Community NRM Action Plan</b>                      Aligned to the Community articulated Visions and Goals, the Plan outlines the actions that the Goulburn Broken CMA will undertake and support to deliver on two of the strategic priorities of the Goulburn Broken RCS, that is 'strengthen Partnerships' and 'embedding resilience'. Embedding resilience is a significant step in helping individuals, communities and organisations achieve their goals in the face of ongoing change.</p>	2020-2025	Implementation phase See Community page 33.
<p><b>Communication, Community Engagement and Partnership Strategy</b>                      This strategy sets out the guiding principles, outcomes, and strategic directions for communication, community engagement and partnership activities delivered by Goulburn Broken CMA board members, staff, and projects. It also outlines implementation and evaluation processes.</p> <p>The strategy realises that effective communications, meaningful community engagement and collaborative partnerships are essential if Goulburn Broken CMA is to achieve its vision of resilient landscapes, thriving communities, and improve and protect the catchment's land, water, biodiversity and community.</p>	2022-2027	Implementation phase See Community page 33.
<p><b>Goulburn Broken CMA Climate Change Integration Strategy</b>                      The Climate Change Integration Strategy consolidates a framework for implementing the Goulburn Broken CMA climate change policy statement: 'In dealing with climate change and likely impacts, the Goulburn Broken CMA will focus on adaptation strategies to increase catchment resilience; greenhouse gas sequestration activity such as carbon brokering will be engaged for the purpose of assisting adaptation responses; and mitigation initiatives led by local government will be actively supported.'</p>	2012-2015	The Climate Change Adaptation Plan for NRM in the Goulburn Broken Catchment 2016 was developed. The implementation of this plan is currently being reviewed as part of a Victorian Government funded exercise with some of the other CMAs.  See Climate change page 32.
<p><b>Goulburn Broken Information and Communication Technology Strategy</b>                      Internal strategy to guide development and delivery of information and communication technology services.</p>	2021 - 2023	Implementation phase. See Governance page 96.
<p><b>Our People - Workforce Strategy</b>                      Part of the annual business cycle to forecast workforce needs to ensure appropriate staffing mix with the necessary capability to ensure current and future delivery of business objectives.</p>	2022-2027	See Human resources page 88.
<p><b>Goulburn Broken CMA Diversity &amp; Inclusion Plan (not legislated but directed by the Minister for Water)</b>                      The Goulburn Broken CMA provides a workplace and work practices that embrace, reflect, respect and promote the inclusion and participation for all regardless of difference.</p>	2017-2022	Completed – further actions are included in the Our People - Workforce Strategy.
<p><b>Goulburn Broken Indigenous Participation Plan</b>                      This participation plan defines the cooperative relationship between Traditional Owners, represented by Yorta Yorta Nation Aboriginal Corporation (YYNAC) and Taungurung Land and Waters Council (TLaWC), and the Goulburn Broken Catchment Management Authority (Goulburn Broken CMA), with respect to participation activities, programs and partnerships within the Goulburn Broken catchment.</p>	2021	Renewal of the plan is in progress. See Community page 33.
<p><b>Reconciliation Action Plan</b>                      The RAP acknowledges our intent and desire as an organisation to expresses our continuing commitment to reconciliation including as leaders for increased cultural respect, engagement, equity and opportunity for employment and business on Country for Traditional Owners, and other Aboriginal and Torres Strait Islander people.</p>	2021- 2023	Implementation phase. See Community page 33.

## Appendix 10: Disclosure index

The Annual Report of the Goulburn Broken CMA is prepared in accordance with all relevant Victorian legislations and pronouncements. This index has been prepared to facilitate identification of the Authority's compliance with statutory disclosure requirements.

Information relevant to the headings listed in Financial Reporting Direction 22 of the *Financial Management Act 1994* is held at the Authority's office and is available on request, subject to the *Freedom of Information Act 1982*.

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<b>Report of operations</b>		
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Legislation	Requirement	page
<b>Ministerial Directions &amp; Financial Reporting Directions</b>		
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## Glossary of terms

**Biolink:** Areas identified for targeted action to increase ecological function and connectivity, improving the potential of plants and animals to disperse, recolonise, evolve and adapt naturally.

**Bioregions:** Large, geographically distinct areas of land with common biophysical characteristics such as geology, landform patterns, climate and ecological features.

**Carryover** was introduced in northern Victoria in early 2007 as an emergency drought measure to allow entitlement holders to carry over some unused water allocation to use in the following season.

**Community NRM:** Community Natural Resource Management is an umbrella term that encompasses the community based environmental groups of the region such as Landcare, Friends of, Conservation Management Network and sustainable farming groups.

**Critical attributes:** see Appendix 1.

**Dammed (regulated) streams:** A river system where major dams or weir structures have been built to regulate the supply or extraction of water. Prior to the establishment of sustainable diversion limits and material volumes of water were set aside for the environment, flow in regulated streams relied solely on water from rainfall and flow remaining after water was extracted for consumptive uses (urban, irrigation and industry).

**Ecosystem:** A diverse and changing set of living organisms within a community, interacting with each other and the physical elements of the environment in which they are found.

**End-of-valley targets** have been proposed for major rivers contributing salt to the Murray River under the (Murray-Darling) Basin Salinity Management Strategy. The purpose of these targets is to maintain salinity levels at the benchmark site, Morgan in South Australia, at or under 800 EC for 95 per cent of the time. These enable within-valley targets to be set. The proposed end-of-valley targets are being investigated to align them with expectations and obligations of different parties at regional, State and Federal levels.

**FLOWS:** A method for determining environmental water requirements in Victoria.

**GMW Connections** was a \$2 billion project funded by the Victorian Government, Australian Government and Melbourne Water to develop a water delivery network to match changing needs and support opportunities for irrigated agriculture across Northern Victoria.

**Investment area:** see Appendix 1.

**Long-term objectives:** Long-term (20-30 year) goals for the system components of the Catchment - people, land, water and biodiversity. These objectives are found in the sub-strategies of Goulburn Broken CMA. Achieving these objectives will contribute to the Vision being realised. In some instances, these objectives may be related to known (or assumed) thresholds and tipping points.

**Minimum (river) flow:** A minimum level of flow that the water authority needs to maintain in the river at a particular location, or a trigger below which water cannot be harvested from the river. Minimum flows are usually specified in water authority bulk entitlements or in environmental entitlements. (See also 'qualification of rights' below.)

**Modernised Whole Farm Plan** is a plan revised to take account of the changed regional channel delivery infrastructure as a result of modernisation.

**Qualification of rights:** If on a seasonal basis there is insufficient water in a water supply system to meet critical water needs, a water shortage may be declared by the Minister for Water and rights to water may be qualified temporarily. A qualification of rights changes a legal entitlement. Rights that may be qualified include licenses, water shares, bulk and environmental entitlements. Private rights may be suspended, reduced, increased or otherwise altered after a water shortage has been declared.

**Regional Catchment Strategy** is a blueprint for integrated natural resource management across a geographic area.

**Registered Aboriginal Parties** are the voice of Aboriginal people in managing and protecting Aboriginal cultural heritage under the Victorian *Aboriginal Heritage Act 2006*. The Act recognises Aboriginal people as the primary guardians, keepers and knowledge holders of Aboriginal cultural heritage.

**Resilience** is the ability of the Catchment's people and environment 'to absorb a shock or setback and to flourish in spite of it, maybe even because of it'. It does not mean 'ploughing through' and doing what we have always done. See page 29 and Appendix 1.

**Resource Condition Target** relates to the condition of the resource and can be measured over the short term or the long term depending on ease of measurement.

**Risk:** see Appendix 1.

**Salt registers** of salt debits and credits are required to be maintained by the State under the *Federal Water Act 2007*. The delayed impacts of dryland salinity are accounted for in the B Registers. Goulburn Broken CMA has set up the framework for the B Register and is establishing a process with DEECA and the Murray-Darling Basin Authority for entering data to complement data already in the A Register under the salinity and drainage strategy.

**Social-ecological systems (SES):** Linked and generally similar systems of people and nature, taking into account cultural, political, social, economic, ecological and technological components.

**System state:** see Appendix 1.

**Thresholds:** A breakpoint between two states of a system that must be exceeded to begin to produce some sort of effect or response.

**Tipping points:** A point where a small change can have a large effect on the state of a system.

**Undammed (unregulated) streams:** A river system where no major dams or weir structures have been built to regulate the supply or extraction of water. Prior to the establishment of sustainable diversion limits and improved management of licensed water use extraction, through local management plans, many unregulated streams were flow-stressed.

## Abbreviations

AASB	Australian Accounting Standards Board	LiDAR	Light Detection and Ranging remote sensing technology
AgVic	Agriculture Victoria	LIDP	Local Industry Development Plans
ARI	Arthur Rylah Institute	LGA	Local Government Authority
BBCMN	Broken Boosey Conservation Management Network	LWMP	Land and Water Management Plan
BoM	Bureau of Meteorology	MCC	Municipal Catchment Coordinator
BRP	Biodiversity Response Planning	MDB	Murray-Darling Basin
BSMS	Basin Salinity Management Strategy (MDBA)	MDBA	Murray-Darling Basin Authority
CaLP	<i>Catchment and Land Protection Act 1994</i>	MERL	Monitoring, Evaluation, Reporting and Learning
CEO	Chief Executive Officer	MFEP	Municipal Flood Emergency Plan
CEWH	Commonwealth Environmental Water Holder	ML	Megalitre
CFA	Country Fire Authority (Victoria)	MLA	Member of the Legislative Assembly
CHMP	Cultural Heritage Management Plan	MLC	Member of the Legislative Council
CMA	Catchment Management Authority	MP	Member of Parliament
CMN	Conservation Management Network	MoU	Memorandum of Understanding
CRC	Cooperative Research Centre	NCCMA	North Central CMA
CSIRO	Commonwealth Scientific and Industrial Research Organisation	NECMA	North East CMA
DCD	Drainage Course Declaration	NLP	Australian Government's National Landcare Program
DEECA	Department of Energy, Environment and Climate Action	no.	Number
DELWP	Department of Environment, Land, Water and Planning (former)	NRM	Natural Resource Management
DJSIR	Department of Jobs, Skills, Industry and Regions	OCOC	Our Catchments Our Communities
DJPR	Department of Jobs, Precincts and Regions (former)	OHS	Occupational Health and Safety
DTF	Department of Treasury and Finance	PEER	Public Entity Executive Remuneration Policy
DTP	Department of Transport and Planning	PV	Parks Victoria
DWG	Designated Work Group	RAP	Registered Aboriginal Party recognised under the Victorian <i>Aboriginal Heritage Act 2006</i>
EBA	Enterprise Agreement	RAP	Reconciliation Action Plan
EC	Electrical Conductivity unit	RaPP	Rangeland and Pasture Productivity Map
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	RCS	(Goulburn Broken) Regional Catchment Strategy
EVC	Ecological Vegetation Class	RLP	Australian Government's Regional Land Partnerships
EWAG	Environmental Water Advisory Group	RSMP	Regional Salinity Management Plan
FOI	Freedom of Information	RTW	Return to Work
FTE	Full-time Equivalent	SES	Social-Ecological System
FWP	Farm Water Program	SIR	Shepparton Irrigation Region
GB CMA	Goulburn Broken Catchment Management Authority	SIRLWMP	Shepparton Irrigation Region Land and Water Management Plan
GHG	Greenhouse Gas	SIRPPIC	Shepparton Irrigation Region People and Planning Integration Committee
GL	Gigalitre	SoO	Statement of Obligations
GMCA	Goulburn Murray Climate Alliance	t CO <sub>2</sub> e	Tonnes of carbon dioxide (CO <sub>2</sub> ) emitted
GMID	Goulburn-Murray Irrigation District	TCV	Treasury Corporation of Victoria
GMLN	Goulburn Murray Landcare Network	TfN	Trust for Nature
GMW	Goulburn-Murray Water	TFWS	Total Flood Warning System
GST	Goods and Services Tax	TLaWC	Taungurung Land and Waters Council
ha	Hectare	TLM	The Living Murray program
HSR	Health and Safety Representative	VCAT	Victorian Civil Administrative Tribunal
IRP	Issue Resolution Procedures	VEPP	Victorian Environmental Partnerships Program
IT / ICT	Information Technology / Information and Communications Technology	VEWH	Victorian Environmental Water Holder
IVT	Inter-Valley Trade transfers	VFMP	Victorian Farm Modernisation Program
km	Kilometre	VIPP	Victorian Industry Participation Policy
KPI	Key Performance Indicator	WGCMN	Whroo Goldfields Conservation Management Network
L	Litre	YYNAC	Yorta Yorta Nation Aboriginal Corporation
LaBIF	Land and Biodiversity Implementation Forum		

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## Staff list 2022-23

Aaron Findlay	Claire Dann	Janice Mentiplay-Smith	Lydia Drake	Russel Haque
Allison McCallum	Collin Tate	Jason Mullins	Mark Turner	Samantha Moreno
Andrea Muskee	Corey Wilson	Jim Begley	Martine Hooper	Shannon Crawford
Annette Neessen	Daniel Lovell	Jo Geddes	Mary Dimit	Simon Casanelia
Ashley Rogers	Darelle Backway	Joel Leister	Meegan Judd	Simon Cowan
Beth Millstead	Diana Giacomelli	Karan Balfour	Megan McFarlane	Steve Wilson
Caitlin Baker	Eamon Reeves	Karen Brisbane-Bullock	Melanie Squires	Sue Kosch
Carl Walters	Eileen Curtis	Kate Bell	Michael Carrafa	Tim Barlow
Carla Miles	Gaye Sutherland	Kate Brunt	Pam Beattie	Tom O'Dwyer
Caroline Keenan	Guy Tierney	Kate Montgomery	Prajit Kotia	Tony Kubeil
Chris Cumming	Jade Smitten	Keith Ward	Rachael Spokes	Vicki Mackenzie
Chris Nicholson	James Burkitt	Kelly Stevens	Rebecca Caldwell	Zara Marais
Christine Glassford	James Castles	Kerstie Lee	Rhiannon Sandford	Zuzanna Lelito

# RECOGNISING MAJOR NRM CONTRIBUTIONS

## Janet Hagen



When Janet Hagen relocated from Melbourne to North-East Victoria for a teaching position at a tiny rural school in 1976 she pursued every opportunity available to take her students on nature walks.

‘I took nature study to the extreme,’ she laughs.

So, it’s no surprise Janet has gone on to devote almost 30 years of her life to community natural resource management projects.

Janet began working with Hughes Creek Catchment Collaborative Landcare Network (HCCCLN) in 1994 as a Rabbit Buster Program Coordinator. Twenty-nine years later she continues to be a facilitator with HCCCLN and has added a vast range of other environmental roles, responsibilities and skills to her impressive repertoire.

Janet is the Strathbogie Ranges Conservation Management Network project manager, Euroa Arboretum committee member, Central Victorian Biolinks Alliance member, is on the Burge Reserve Trust for Nature committee of management and is the ‘brains trust’ of the Goulburn Broken Indigenous Seedbank.

‘I enjoy all elements of community natural resource management,’ Janet said.

‘My passion is restoring landscapes with large scale revegetation projects, creating biolinks between patches of remnant bushland from the Strathbogie Ranges, across the Goulburn Broken Catchment.’

Janet was involved in the first trial to provide on-ground works through a community network with the Goulburn Broken CMA and her positive relationship with the CMA has continued ever since.

Janet said the combination of leadership from the Goulburn Broken CMA and teamwork from the community networks were the key reasons the partnership between the authority and community-led environment groups continued to prosper.

‘The CMA needs community groups to deliver programs and we are equal partners with the CMA in that, coming together well.

‘The success is that we work together as friends. We have a shared vision and it’s a great model of how things can happen.’

Janet said there had been many changes in community natural resource management through the years.

‘There’s been a lot of change in people’s attitude towards the environment over the decades, it’s much more positive now. The scope of involvement for the community is broader and includes endangered species and habitat conservation as well as the focus on regenerative agriculture.

‘Over 30 years the change to the environment is visible. I can drive through the landscape now and see the difference. I think ‘I remember when that was first planted and look at it now’. That’s very satisfying.’

Janet and her husband are sheep and cattle farmers at Ruffy where 30 per cent of their 300ha is protected native vegetation. She’s a direct seeding contractor, registered seed collector, Trust for Nature covenanter and a grandmother.

‘I have no formal natural resource management qualifications but I have accumulated heaps of knowledge by taking every opportunity to attend training courses, conferences, forums, workshops, field days and site visits,’ Janet said.

‘Practical application of all this experience on our own property has been a vital part of my life, putting in to action the Landcare philosophy.’

Janet is mentoring the future leaders of Landcare at Hughes Creek and she’s still fully committed.

‘I love doing this stuff so much that I’ll probably never want to hand it over completely. I’ll always be here, even just in the background.

‘It’s great to be with like-minded people, to enable people to achieve their goals for their properties, to share information and ideas.

‘The result of 30 years of Landcare here is that we have an engaged community – people want to learn more, do more, which is great.’

And after three decades in community natural resource management, what does Janet have on her bucket list?

‘My dream is to upscale the operations of the Euroa Arboretum to deliver the volume and quality of native plants and seed required to meet the needs of the rural community’s move towards carbon neutral farming.’

‘My vision is an economically viable native seed and plant industry employing teams of skilled staff that efficiently and effectively restore the bush.’



## PARTNERS IN CATCHMENT MANAGEMENT

The health of the Catchment relies on many partner organisations and individuals. In fact, there are so many partner organisations of the Goulburn Broken Catchment Management Authority that we have found it challenging to capture them all. Any partner logo not appearing above does not undervalue their contribution to the Catchment.

## GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY CONTACTS AND OFFICES

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