



**GOULBURN
BROKEN**

CATCHMENT
MANAGEMENT
AUTHORITY















GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

ANNUAL REPORT 2020-21



RATINGS LEGEND

2020-21 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 2018-21	 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 2013-2019.

Appendix 1 (page 142) 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.

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 2020-21 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 2013-2019.

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.gbcma.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 30D, which aims to achieve consistency and minimise costs and environmental impact across government agencies.

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ISSN 978-1-876600-02-0

Front cover

Main photo:

Working for Victoria crews gathered at Winton Wetlands to share their experiences.

Inset photos (from left to right):

1. The Drought Employment Program provided agriculture sector with employment during the drought.
2. Rumbalara Aboriginal Corporation hosted bee training as part of the Follow the Flowers project.
3. Water was delivered to Kanyapella for the first time in 2020.
4. Yorta Yorta staff carried out cultural surveys at a Devenish property as part of the Linking Landscapes project funded through the Australian Government's National Landcare Program.
5. Engagement for the Goulburn Broken RCS went virtual due to Coronavirus (COVID-19).



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Recognising a major natural resource management contribution –
Shirley Saywell

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Chair's report



A highlight of the past 12 months has been the community input and involvement in renewing the Goulburn Broken Regional Catchment Strategy (RCS). The strategy has again been developed using resilience principles. Those principles, particularly around adaptation and managing complexity and connectivity, were well and truly put to the test

thanks to Coronavirus (COVID-19). Despite the challenges and uncertainty, a huge amount of quality feedback has been pulled together to inform a strategy that reflects the priorities and aspirations of those who live, work, visit or invest in our catchment and those involved in natural resource management.

Changes in climate, demographics and land and water use were identified by many and varied groups as having the biggest influences on the Catchment's land, water and biodiversity. The landscape transformation under way across the Catchment due to these drivers of change, means our organisation also needs to evolve to respond. This involves strengthening our key partnerships, particularly with the Catchment's two Registered Aboriginal Parties, Taungurung Land and Waters Council and Yorta Yorta Nation Aboriginal Corporation. We have well-established relationships with both and look forward to continuing to work with them to design and deliver to local, state and national natural resource management initiatives.

The knowledge, concerns and insights of our partners and communities has been important in informing many of the submissions we have made over the past 12 months on a number of proposed changes to land, water and biodiversity policies and legislation. This has included feedback on regulations to increase public access to Crown land water frontages and reviews of the *Wildlife Act 1975* and Goulburn to Murray trade. While we appreciate the steps that have already been taken to try and reduce environmental damage caused by inter-valley transfers due to increased downstream demand, we will continue to advocate for the long-term health of the Goulburn River. We thank the Minister for Water for her strong leadership on this issue.

Agriculture still underpins many local economies but how and what we farm is changing; more people are moving to the region because they value its natural beauty but they often live and work in the larger service-based towns and centres. These changes place even more pressure on the region's natural resources but also open up opportunities for the CMA to work with its partners to explore innovative ways to engage with people and foster the stewardship needed to achieve resilient landscapes and thriving communities.

A great example of what can be achieved through this collaborative approach is the Shepparton Irrigation Region Land and Water Management Plan. This year marks the 30th continuous year of the plan, which has directed \$2.65 billion of community and government investment across the Catchment's irrigated landscape. The keys to its ongoing success are strong community involvement and commitment and its focus on resilience thinking to identify options that support the region to adapt and transform.

Thank you

Transformation also requires good governance and I would like to thank my fellow board members for their insight and ongoing support during this exciting period for the CMA and welcome new director Leanne Miller.

A big thank you too to CEO Chris Cumming for her steady hand and leadership during these uncertain times. Chris came on board at the height of COVID-19 and despite the challenges that presented, she has already put her stamp on the organisation and played an important role in supporting the staff so they could continue to deliver services to the community.

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 2021.

Helen Reynolds

Chair

Goulburn Broken Catchment Management Authority
23 September 2021

Chief Executive Officer's report



The Goulburn Broken CMA has a long history of advocating for and delivering great outcomes for the region and I am proud that we again delivered a suite of programs and initiatives important for the health of our catchment and communities. The highlights below reflect the breadth of work undertaken by our dedicated team.

We responded quickly to the Victorian Government's drought and eco-stimulus initiatives and delivered the 'Drought Employment Program' and 'Working for Victoria' programs which provided short-term work, training, social support and income for 71 people whose livelihoods were affected by dry conditions and then the pandemic. These programs delivered onground natural resource management works, including the collection of native seed, riparian fencing, weed control and the removal of rubbish dumped in our regional, state and national parks. It was pleasing that many participants went on to find ongoing employment with partner agencies or, due to increased confidence and skills, turned their hand to new careers.

Our floodplain management staff were busier than ever with a record 1,573 responses processed. An increase of 40 per cent from 2019-20. The new Goulburn Broken Community Flood Intelligence Portal was launched in September 2020. A joint project with local councils, the portal covers 14 communities at risk from flooding with detailed flood data to assist with land-use planning, building, flood insurance and flood preparedness. Seven flood studies are underway or completed, with the data contributing to improved understanding and decision-making around land-use planning and flood risk.

Our work protecting natural habitat and species continued in many projects across the catchment. As an example the 'Linking Landscapes and Communities' project, funded through the Australian Government's National Landcare Program (NLP), delivered 20 ten-year land management agreements for improved stewardship over 218 hectares, 819 hectares of pest animal control, 643 hectares of weed control, and removed stock grazing from 182 hectares. Environmental programs could not have been achieved without our valued delivery partners, which include community NRM groups, Traditional Owners, all levels of government and of course landholders.

The 'From the Ground Up' soil health project, which is also funded through the Australian Government's NLP and delivered with many of our industry and community partners, continued to deliver well-attended field days and activities, albeit virtually. Promoting best-practice approaches to improve soil health for greater productivity, increased biodiversity and climate change adaptation clearly resonates with farmers, no matter what scale they operate at. Salinity and drainage work continued protecting soil health and water quality.

Eight years of monitoring continues to highlight the benefits of our targeted and timely deliveries of water for the environment along the lower Goulburn River and Broken River and Creek to improve native fish breeding, water quality and bank health and condition. Water to

promote and support environmental, cultural and recreation values was delivered to a number of wetlands, including to Kanyapella for the first time, with terrific bird breeding responses, particularly in the Ramsar-listed Barmah National Park.

Contributing alongside our many stakeholders, to the development of a truly collaborative and resilience based six-year Regional Catchment Strategy has been an honour. The extent of engagement reflects the continued importance of the natural environment to our communities and the recognition of the value of the environmental, productive and human services nature provides. I look forward to finalisation of the draft in the first part of 2021-22.

Our program delivery is supported by our talented and hard-working corporate team who help tell the story to investors, partners and the community and provide the systems to meet our financial and legislated obligations efficiently. This year the team took on the extra responsibility of leading the introduction of the D365 business management software system across seven CMAs, to further streamline and integrate the CMAs' business operations.

My first year at the CMA has been memorable in many ways a highlight being the depth of trusted and respected relationships in the catchment, a credit to all the agencies, groups and individuals collectively focused on the wellbeing of our communities and natural resources.

It is pleasing to have financial clarity for the next three years, with some great ongoing projects and new initiatives secured. I thank the Department of Environment Land Water and Planning for our close working relationships and the ongoing commitment to regional delivery.

I particularly thank the Goulburn Broken CMA staff team for being adaptable, cheerful and productive no matter their work location. The insights gained during the pandemic have informed and fast-tracked new ways of working. The development of our Flexible Work Framework recognises the value we place on our staff's wellbeing and supports their contribution to family, community and an innovative, productive work force.

I thank the Goulburn Broken CMA Board for their wisdom and support and look forward to delivering to our shared aspirations for the catchment and the implementation of the Goulburn Broken Regional Catchment Strategy in 2021-22.

Chris Cumming
Chief Executive Officer

Goulburn Broken profile

Goulburn Broken Catchment Management Authority

Powers and duties

The 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 2020 to 30 June 2021 were:

- the Hon Lisa Neville MP, Minister for Water;
- the Hon Richard Wynne MP, Acting Minister for Water; and
- the Hon Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change.

(See page 135 for names of all persons who were responsible during 2020-21)

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 88) for details.

Funding and staff

Goulburn Broken CMA's income for 2020-21 was \$17 million, derived from the Victorian and Australian Governments, regional sources and other government entities.

As at 30 June 2021, 48 (full-time-equivalent) staff were directly employed. See the 'Human resources' section (page 80) 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 the 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.

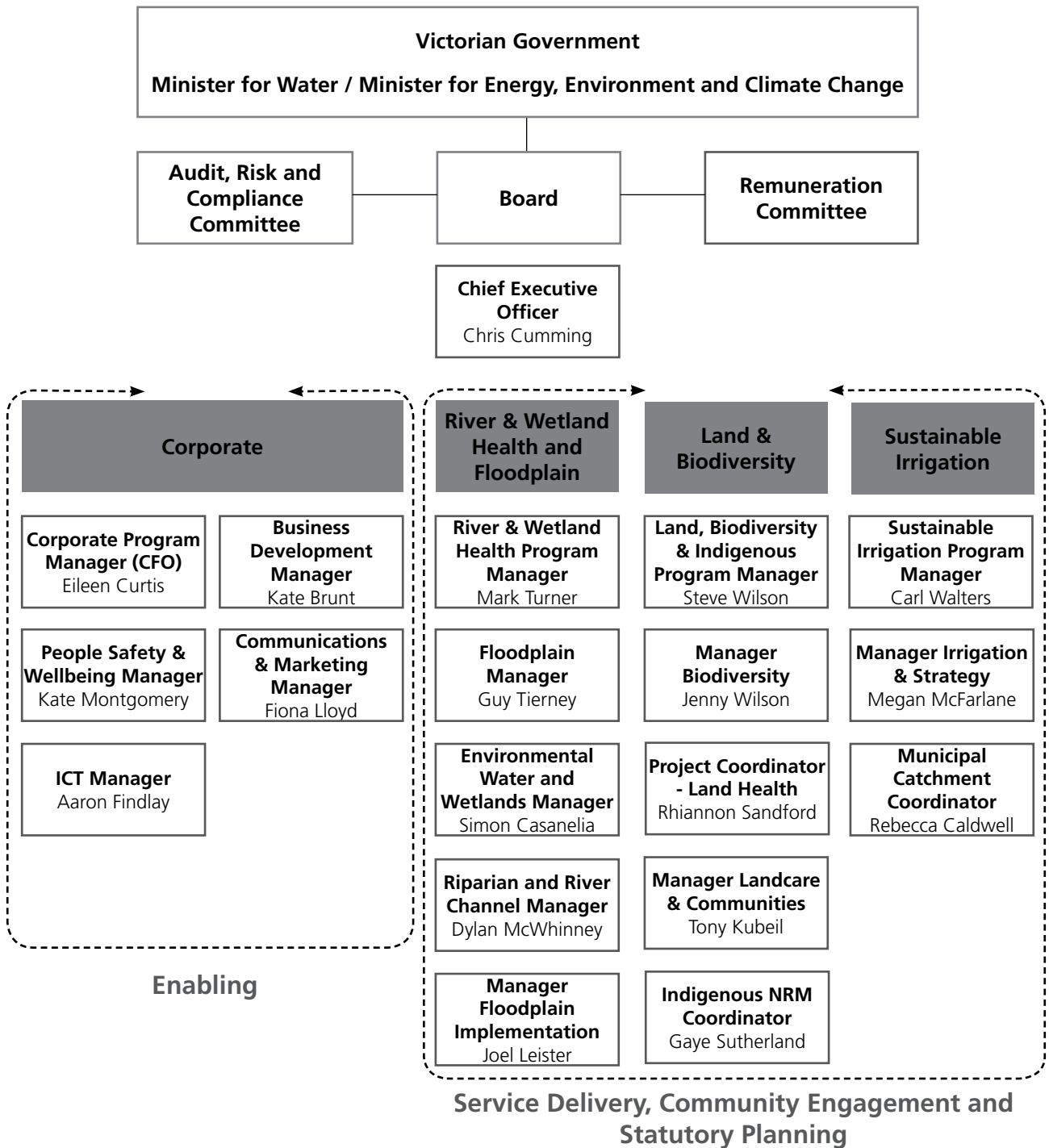
Leadership: we have the courage to lead change and accept the responsibility to inspire and deliver positive change.

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.

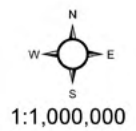
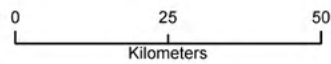
Goulburn Broken CMA business structure



Goulburn Broken Catchment ^{i,ii}



- Agricultural Floodplains
- Productive Plains
- Commuting Hills
- Upland Slopes
- Southern Forests
- Urban Centres



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 2 and 3.

Whole of Catchment

The Goulburn Broken Catchment covers 2.4 million hectares, about 10.5 per cent of Victoria, and extends north from near the outskirts of Melbourne to the Murray River.

- Has an estimated population of 215,000 people, which includes about 6,000 Indigenous Australians, many of whom identify as Traditional Owners of this region.
- Includes approximately one million hectares of dryland agriculture and 270,000 hectares of irrigated agriculture. Public land covers 800,000 hectares, including extensive areas for conservation.
- Yields more than 3,500 gigalitres or 10.5 per cent of the Murray-Darling Basin's water.
- Agricultural production is the dominant land use, generating 15.8 per cent of Victoria's revenue from agricultural production, with a gross value of more than \$2.37 billion.

Major environmental challenges include degraded waterways, reduced extent and quality of native vegetation, reduced water quality and quantity, dryland and irrigated area salinity, biodiversity loss, and pest plant and pest animal invasion. These challenges are being exacerbated by changes in climate.

Agricultural Floodplains

Northern floodplains with Murray River along boundary with NSW.

- Landscape highly modified for agriculture with remaining vegetation fragmented and found mainly on waterways, wetlands and roadsides.
- Irrigation supports dairy, horticulture and cropping and a large food processing sector with recent major investment in on and off-farm irrigation infrastructure.
- Barmah National Park highly valued (Ramsar listed) internationally important breeding site for many bird species.
- Long history of community leadership in managing land and water problems.

Threats: Further loss and decline of vegetation, change in water availability and use, salinity, poor natural drainage, future farming options and floods continue to threaten production and channel form or stability.

Commuting Hills

Includes the mountainous southern and south western urban fringe.

- Public and private forests support many plants and animals including the Golden Sun Moth.
- Land use also supports a range of agricultural industries and lifestyle communities.
- Waterways remain largely healthy because of the extent of remaining vegetation.
- People drawn to area for natural beauty and lifestyle and commute to Melbourne for work.

Threats: Fire remains a major threat to safety and properties, along with native vegetation loss through population pressures and development.

Productive Plains

Foothills and floodplains towards the north of the Catchment.

- Habitat provided by vegetation along waterways, roadsides, ranges and spring soak wetlands.
- Dryland farming includes cattle, sheep, cropping and viticulture and many farms remain in same families for generations with average farming populations ageing.
- Rivers and creeks in moderate condition and wetlands in moderate to good condition.
- Landcare and conservation management networks establish sustainable farming practices and protect threatened species.

Threats: More habitat loss, ageing farming populations and declining social connection are threats to biodiversity and farming futures.

Southern Forests

South east mountains, waterways and snow covered alps.

- Unique alpine vegetation supports endangered Mountain Pygmy-possum.
- Most of the area is public land managed for conservation, but also for recreation and timber production.
- Waterways are in good condition with recreation and tourism highly valued.
- People live in small and seasonal communities and travel to and from this area.
- The interface between private and public land is important for management.

Threats: Waterway health threatened by erosion along with threats to vegetation including fire, weeds and pest animals.

Upland Slopes

Includes the slopes and valleys towards the south of the Catchment.

- Grazing and other agricultural enterprises occur in cleared valleys surrounded by partially forested hills and vegetation along waterways.
- Lake Eildon provides water for agricultural production, recreation, tourism and river health along the Catchment and beyond the boundary.
- Generational farmers live alongside increasing numbers of lifestyle properties and absentee landholders.

Threats: Erosion, weeds and fires are among the threats to the amount and quality of highly valued water, used for many purposes.

Urban Centres

Major urban centres of Shepparton, Seymour and Benalla.

- Biodiversity is poor but urban people value the rivers and remaining vegetation for recreation.
- Provide employment, housing, schools and services surrounded by farming and lifestyle properties on Goulburn and Broken River floodplains.
- Water is pumped from the rivers for domestic use and runs off into rivers following storms.
- Large diverse populations.

Threats: Pollution, land development and aquatic weeds threaten river health, including water quality and floods are an ongoing threat to properties and safety.

Key events 2020

July

As part of the National Landcare Program (NLP) Linking Landscapes (Grey Box) project, 2000 copies of 'The Ground Storey' were printed and distributed.

Taungurung crews planted a total of 900 Silver Banksia trees at Lima South Sandy Creek site to increase the resilience and build the population of a recently discovered stand of very old Banksia trees as part of the State's Our Catchments Our Communities 'Bogies and Beyond Project'.

Additional funding allowed the successful GMID Drought Employment Program to be extended to keep farmers and farm workers affected by drought delivering onground works.

\$1.4 million of Working for Victoria funding received to provide work for 25 regional people for six months who had been affected by COVID-19.

August

Mount Buller Mount Stirling Resort Management finalised the update of Recovery Plan for the Mountain Pygmy-possum, supported by funding through the NLP. The 2020-2025 revised management plan will inform future revegetation activities and other activities to improve the trajectory of this endangered species.

Minister for Water, Lisa Neville announced that the Murray-Darling Basin Authority (MDBA) had agreed to aim for Goulburn to Murray inter-valley trade deliveries of a maximum of 40 gigalitres a month or less over summer and autumn to stop further environmental damage to the Goulburn River.

A total of 500 megalitres of environmental water was delivered to Kanyapella Basin to promote the growth of wetland vegetation and provide habitat for waterbirds. This was the first time environmental water was delivered to this wetland.

September

As part of the Barmah NLP project, the Yorta Yorta Woka Walla works team completed fox baiting across 30,000 hectares of Barmah National Park.

The new Goulburn Broken Community Flood Intelligence Portal was launched. The portal covers 14 communities at risk from flooding with detailed flood data to assist with land-use planning, building, flood insurance and flood preparedness. The portal is a joint project with four local councils with a fifth council to join later.

Four thousand plants were planted as part of the Kilmore Water Quality Offsets Project. The project – the first of its kind – is being delivered with Goulburn Valley Water.

Interviews with a range of community champions who were instrumental in the development and implementation of the 30 year Shepparton Irrigation Region Land and Water Management Plan (SIRLWMP).

A total of 1,000 megalitres of environmental water was delivered to Gaynor Swamp to promote growth of wetland vegetation and provide habitat for waterbirds. This was the largest environmental water delivery to this wetland to date.

October

The 'On Your Guard' paddock tree guard program reached a milestone of 500 purpose-built paddock tree guards distributed to landholders throughout the Catchment.

A series of three 'Soils and soil test interpretation' webinars were held with Cath Botta as presenter. 177 people attended the three workshops that covered soil characteristics and understanding your soil test results.

Delivery of Spring active Dung Beetles to dairy farmers within the Shepparton Irrigation Region completed after a 'Dung Beetle Dash' to Kaniva (South Australian border) to pick up the dung beetles. Once nurseries are established on farms, beetle harvesting should take place in August 2021.

Flood studies under way included: Upper Broken and Boosey Creeks; Kyabram; Jamieson; Sunday and Dry Creeks; and Goulburn and Broken Rivers.

The Upper Deakin Hybrid Drainage System completed with removal of obstructions to flow and the Declaration of the Drainage Course.

The whole farm plan incentives program (funded through EC4) completed and delivered an impressive 224 plans over four years.

GB CMA launched its Flexible Work Framework.

November

As part of the Biodiversity On-Ground Action Project 'Managing Threats to the Longwood Plains Reserves', a total of 66 noisy miners were culled from Balmattum Nature Conservation Reserve and Monea North Nature Conservation Reserve and 22 hectares of direct seeding on private land linking to roadside vegetation was completed.

Goulburn Broken Regional Insights Paper update and online workshops were conducted as part of Goulburn Broken RCS consultation.

The SIR watertable map for 2019-20 was released and showed a small increase in groundwater mounds following higher rainfall during this year.

A pulse of environmental water was delivered down the lower Goulburn River to promote Golden perch movement and breeding. Monitoring captured a large number of Golden perch eggs during the fresh indicating it was successful.

GB CMA held its first virtual all staff workshop.

Goulburn Broken CMA EBA 2020-2024 was approved by the Fair Work Commission.

December

Goulburn Broken 2021 Calendar was produced with 4,500 copies distributed.

RCS consultation in full swing with a multitude of individual and grouped stakeholder sessions on the 'Insights paper' as well as technical consultations on the theme papers (biodiversity, land, water and community).

Engaged with MDBA on the Rural Council of RDCs Climate Change Initiative.

The Goulburn Murray Region Resilience Plan formally launched and a call for members of the community based Taskforce released.

Key events 2021

January

As part of the NLP Mountain Pygmy-possum project, works continued on the Bugungga Indigenous Garden at Mansfield Secondary College to raise awareness of the Mountain Pygmy-possum and provide a place for cultural and natural resource management education talks to occur.

February

The drawdown of Lake Benalla began to prevent spread and growth of the aquatic weed Cabomba.

Goulburn Murray Resilience Strategy completed and launched.

Completion of the GMID Drought Employment Program with 30 participants delivering a range of onground works and increasing their skills.

Hundreds of waterbirds successfully bred in Boals Deadwoods wetland in Barmah Forest. Environmental water was delivered to the wetland during the breeding event to maintain water levels.

March

Presented to the MDBA Climate Summit on the catchment resilience approach and programs delivered to support a healthy Murray-Darling Basin.

The NLP 'From the Ground Up' project hosted a COVID-19 Safe face-to-face workshop. Thirty-seven participants learnt about soil moisture and carbon.

The Victorian Government released a Regulatory Impact Statement proposing changes to the rules that govern trade and delivery of water from the Goulburn River to the Murray River. The changes aim to protect the environmental, cultural and social values of the Goulburn River by limiting traded water delivery over summer and early autumn.

The Goulburn Broken CMA board approved the updated Northern Victoria Irrigation Development Guidelines.

April

The NLP Mountain Pygmy-possum project planted 2,000 plants at Mount Buller with the support of Taungurung, to enhance food resources available for the possum and to mitigate declines in Bogong moth numbers.

East West Alliance 'Follow the Flowers' project held a workshop in Mildura for key stakeholders. This project supports the six Murray Corridor Aboriginal land-based businesses to develop the initial farm assessments.

The third and final virtual Farm Walk and Talk took place with the primary focus of the event to look at ways in which farmers were adapting to climate change on their own properties.

A Statewide Carbon Sequestration Analysis Project Workshop was held with CMAs, Water Corporations, DELWP and contractors to select three sites within each catchment to undergo a detailed carbon sequestration analysis.

Engagement with landowners in the Murray Valley West Drainage Course Declaration area successfully completed.

Victorian government funding secured for the Shepparton Irrigation Region Land and Water Management Plan delivery for two years.

May

As part of the NLP Barmah Ramsar project the Floodplain Ecology Course was delivered near Barmah with 22 participants completing the course, including four Yorta Yorta Indigenous Rangers.

North Central, North East, Corangamite and Goulburn Broken CMAs co-hosted 'Cascade Connections' a professional development training event in Creswick for the part-time local Landcare Facilitators.

Goulburn Broken CMA partnered with Agriculture Victoria and South West Goulburn Landcare Network to host a field day on empowering landholders to understand and manage their own erosion issues.

Landcare Victoria Inc. released the Landcare Victoria Strategic Plan 2021-2024

'The Ground Storey' booklet, launched at the Broken Boosey State Park, Katamatite, providing the community with information about the importance of the ground layer for biodiversity and property health.

Presented to the 'Friends of Chinaman's Island Group' on the value of the ground layer to achieving a diverse ecologically healthy system to the local fauna of the Yarrowonga/Chinaman's Island region. The event was attended by 26 people.

The Guilfus-Congupna Hybrid Drainage system completed including the Drainage Course Declaration and Obstruction removal through the whole sub-catchment.

June

Shepparton Irrigation Region Land and Water Management Plan - 30 Year Achievements Report finalised for release to the community and partners.

Revised whole farm plan incentive program for the Shepparton Irrigation Region started and additional funds announced to support the GMW Water Efficiency Project through whole farm plan incentives.

Funding for the Waranga Basin Hybrid Drainage system announced as part of the follow on from the state budget.

Victorian government funding announced for Community NRM Networks to support employment of facilitators to ensure the effective and efficient operation of the community led organisations over the next four years.

NLP project 'Linking landscapes and Communities' delivered 20 ten-year land management agreements for improved stewardship over 218 hectares; 819 hectares of pest animal control; 643 hectares of weed control and 182 hectares of stock grazing removed.

Interim Trade and Operating Rules for the Goulburn River - Acting Minister for Water Richard Wynne announced the outcomes of the Goulburn to Murray trade review and the arrangements for the 2021-22 water year.

Summary catchment condition assessment (Statewide standard format)

The following reporting format is based on a statewide 2016 CMA and DELWP trial under the Victorian Government's strategy, Our Catchments, Our Communities. Assessments are from the perspective of the catchment manager and based on available evidence. Goulburn Broken CMA has provided supplementary regionally relevant evidence beyond the scope of statewide needs.

Theme	Catchment condition assessment			Details	
	Previous 3 years		2020-21		
Community	Neutral		Concerned		pages 28 to 33

There are 96 active natural resource management groups, 12 networks, 3207 members and 3238 volunteers in the Catchment (page 29). Social media followers increased in number, with 3206 Facebook 'page likes' in June 2021 (up from 2861 in June 2020), 1812 Twitter followers (up from 1735) and 543 Instagram followers (up from 361) (page 30). The Country News monthly column continues to reach over 44,000 households.

Funding available to community NRM groups (including industry and partner organisations) through the CMA was \$1.2 million in 2020-21 (page 31). Diverse stakeholders are represented on high-level regional and local community NRM forums: partner farmers, Traditional Owners, local and regional government agencies, Landcare and recreation groups, and others are strongly networked. Increased urbanisation continues to influence the catchment community. Traditional Owners are participating more in high-level decisions supported by mechanisms such as the Recognition and Settlement Agreement (pages 21, 24 and 31) and there is significant scope for greater involvement from further funding.

Since 1990, unavoidable changes that extend beyond natural resource management have shifted roles and responsibilities in government and regional and local community partnerships. This has led to ongoing adjustment in engagement of people in decision-making and action. Rapidly changing demographics in recent years have also prompted the need for different community engagement methods.

Since March 2020, the Coronavirus (COVID-19) pandemic has driven another change in approach to engagement, and while transformations in communication technology have helped engage parts of the community, COVID-19 has limited engagement with some sectors. Many forums complied with social distancing rules by going online, supported by apps across multiple platforms.

Communities, partner organisations, farmers and others have achieved significant onground changes with appropriate levels of government support. There are increasing and competing demands for public resources, as such community and agency groups have identified the need to broaden the investment and contributions into NRM beyond traditional pathways.

Biodiversity	Concerned		Concerned		pages 52 to 58
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In 2020-21, eight community groups and a network engaged as delivery partners built capacity and delivered community engagement and incentives to landholders. The partners were: Longwood Plains Conservation Management Network; five Landcare Networks (Up2Us, South West Goulburn, Upper Goulburn, Goulburn Murray, and Gecko Clan); and two friends groups (Regent Honeyeater Project and Euroa Arboretum).

A total of 6188 hectares of remnant vegetation has been fenced since 2013-14, including 518 hectares in 2020-21.

Linking Landscapes and Communities project delivery included twenty 10-year management agreements on private land and 1462 hectares of pest plant and animal control (page 56). The Mending Mountains for Pygmy-possums project increased and improved critical habitat through 6 hectares of revegetation, 1000 hectares of cat control, and 15 hectares of weed control. Biodiversity Response Planning and National Landcare Program projects continue to be implemented: Ribbons of Blue, Sashes of Green project incentives delivered native vegetation works of over 455 hectares (pages 37, 74 and 151).

Native vegetation long-term targets are not being met (graph page 53). While native vegetation actions have improved 1.4 per cent of the Catchment's private land in the past 10 years, a net increase in extent of 0.3 per cent is not enough to support all native species. Ongoing clearing, new and existing invasive pest plants and animals, and other threats such as urbanisation are exacerbated by climate change. They continue to add to the habitat loss and degradation that began in the 1800s: the landscape has changed greatly, particularly on private land where 5 per cent of original native vegetation remains and most remnants do not contain the original diversity of species.

Assessment criteria

Positive		An optimistic future with evidence that events during the year will have a positive impact on the longer term.	Neutral		A largely neutral state, where events during the year may have been significant but are within expected variation and will have little impact in the longer term.
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Theme	Catchment condition assessment				Details
	Previous 3 years		2020-21		
Waterways	Neutral		Neutral		pages 34 to 51

Stock grazing has been removed or sensitively managed along 286 kilometres of streams through fencing since 2013-14, including 36 kilometres in 2020-21 (pages 45 and 146). A total of 6,285,628 megalitres of water has been released for the environment since 2007-08, including 628,691 megalitres in 2020-21 (pages 17, 43, 45 and 147). In 2020-21, monthly rainfall totals varied around long-term averages (page 44) were mirrored by overall average river inflows. Local and regional agency and broader community water-management partnerships strengthened markedly in the years before COVID-19 restrictions made partnering difficult (pages 39 to 42).

Water quality (pages 38 and 70) and fish populations improved significantly through changes such as removal of stock-grazing and fish-barriers, resnagging of streams, tree planting, waste-water management and water for the environment. Dry periods and climate change continue to be a significant challenge. The risk from high unseasonal flows to streambank vegetation and critical habitat in the high-value lower Goulburn River and Barmah Forest continues to increase. Managing waterways for regional values becomes challenging because of competing priorities from other parts of the southern-connected Murray-Darling Basin. Waterways are also subject to increasing pressure from recreation and other land uses. Despite increasing waterbird habitat in the Goulburn Broken Catchment through environmental flows, populations of many species across the MDB seem to be declining. Increasing unauthorised activity across the catchment is affecting waterways. There have been more blue-green algae outbreaks in recent years.

Since 2000, waterways have been impacted by prolonged drought, fires and to a lesser extent, floods. Water availability for agriculture is as a major risk for the Catchment's social-ecological systems. In 2010, 15 per cent of stream length in the Goulburn and Broken basins were in good or excellent condition (9 and 6 per cent respectively, using the index of stream condition (bar chart page 38)). The overall ratings had not changed significantly since 2004. There have been significant floodplain management improvements in many geographic areas, with others scheduled (pages 47 to 51). As more infrastructure and assets are placed within floodplains, flood impacts potentially increase, but through floodplain management, annual average damages and social trauma have significantly decreased (page 48).

Land	Neutral		Neutral		pages 59 to 67
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In 2020-21, 1132 people (including 571 farmers) participated in 40 activities around resilient farming through 15 projects to the value of \$223,194 funded by the Australian Government. Goulburn Broken CMA staff and 13 industry and community partners delivered on topics such as: spatial variability in soil acidity and soil organic carbon, soil carbon trading, regenerative grazing, introduction to soils, soil test interpretation, erosion management, increasing biodiversity in cropping, holistic management training, and property planning for small acreage. Due to COVID-19, delivery of the Victorian Government's Landcare Grants from 2019-20 was extended to June 2021. Goulburn Broken CMA continued supporting the 24 projects and 21 organisations affected. COVID-19 had a significant impact on communities' ability to undertake onground works.

Since 1990, perennial grasses have returned to steep hills and farmers are increasingly aware of groundcover and the need to revegetate eroding gullies and manage soil acidity. While management of livestock in dryland pastures has improved, in the last ten years drought, dry springs, poor autumn breaks, and a proliferation of pest and native grazing animals have resulted in low cover, bare ground and exposed soil in many areas (page 61). In 2021, further pressure on soils came from the burning of stubble that followed a good season.

In April 2021, 90.2 per cent ground cover in agricultural land again reflected a good autumn break, as it did in April 2020 (89.1 per cent). Saline discharge sites remain present and active, but with most sites able to be managed, impacts are confined to the local site or farm.

Increased visitor numbers (which have escalated because more people are holidaying domestically and locally), along with invasive plant and animal pressures, are impacting on environmental and cultural heritage of public land. Elevated land values are driving farm subdivision and land turnover. Invasive plant and animal management is mainly focused on new and emerging species and complementing community activity. High and increasing long-term risks in hot-spot areas from existing and emerging threats include deer in the foothills and feral horses in Barmah National Park.










Assessment criteria

Concerned		A level of concern that significant events during the year may have an adverse impact in the longer term.	Highly concerned		A high level of concern that significant events during the year are likely to have an adverse impact in the longer term.
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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 ⁱ	Catchment condition summary			Snapshot
	1990	2021	Long-term risk ⁱⁱ (given current support)	
Community 			MEDIUM	<ul style="list-style-type: none"> — Traditional Owners are participating more in high-level decisions supported by mechanisms such as the Recognition and Settlement Agreements. There is significant scope for greater involvement if more funding becomes available. — Communities, partner organisations, farmers and others have achieved significant onground changes with appropriate levels of government support. — 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 (including Landcare) and individuals is uncertain and volunteers are ageing and participation in government programs is dropping off in some locations. — 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. However, COVID-19 has limited engagement in some sectors of the community. — The Goulburn Broken community is changing and as a result there is a shift in who and how the community influence and lead.
Waterways 			MEDIUM	<ul style="list-style-type: none"> — Water quality and fish populations have improved significantly from changes such as removal of stock-grazing and key fish-barriers, resnagging of streams, tree planting, waste water management and the delivery of water for the environment. — Dry periods and climate change continue to be a significant challenge. — Despite increasing waterbird habitat in the Goulburn Broken Catchment through environmental flows, populations of many species across the Murray-Darling Basin seem to be declining. — The risk from high unseasonal flows to streambank vegetation and critical habitat in the high-value lower Goulburn River and Barmah Forest continues to increase. Managing waterways for regional values becomes challenging because of competing priorities from other parts of the southern-connected Murray-Darling Basin. — Waterways are also subject to increasing pressure from recreation and other land uses. — Local and regional agency and broader community partnerships associated with waterway management are strengthening. — Increasing unauthorised activity across the catchment is affecting waterways. There have been more blue-green algae outbreaks in recent years.
Floodplain management 			MEDIUM	<ul style="list-style-type: none"> — There have been significant floodplain management improvements in many geographic areas and others have been scheduled. — As more infrastructure and assets are placed within floodplains, flood impacts potentially increase, but through floodplain management tools, annual average damages and social trauma have significantly decreased. — Climate change considerations are built into the Flood Studies.

Catchment condition:  Very poor  Poor  Satisfactory  Good to excellent

i, ii, iii and iv - See pages 14 and 15 for Footnotes.



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		Risk to system thresholds / tipping point					Long-term strategic implementation	Details page
Critical attribute affecting long-term catchment health ⁱⁱⁱ	Contribution to system function		Trend 2018-21	With current support	With no support			
	1990	2021						
Community capacity to influence and lead				HIGH	VERY HIGH	Escalated response ^{iv}	29	
Community capacity to be involved and act onground				MEDIUM	HIGH	Watch & adapt	29	
Streamflows and wetland inundation:								
– Dammed (regulated) streams				MEDIUM	VERY HIGH	Early	36, 40	
– Undammed (unregulated) streams				HIGH	VERY HIGH	Middle	36,40	
Streamside (riparian) vegetation				LOW	HIGH	Late	37, 41	
Water quality				MEDIUM	HIGH	Watch & adapt	37, 41	
Fish passage and habitat				LOW	MEDIUM	Late	38, 42	
Flood impact				MEDIUM	VERY HIGH	Late	47-41	

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

Investment area ⁱ	Catchment condition summary			Snapshot
	1990	2021	Long-term risk ⁱⁱ (given current support)	

Biodiversity			VERY HIGH	
	<ul style="list-style-type: none"> – Native vegetation improvements actions, such as revegetation and stock control, have improved 1.4 per cent (22,470 ha) of the Catchment's private land in the past 10 years. After accounting for losses also during this time, native vegetation extent has increased by the order of 0.3 per cent (4,500 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. The removal of logging on private land such as the Strathbogie Ranges contributes to native vegetation improvement. – The scale of change in areas managed for conservation is also not sufficient. Thresholds have been breached and many flora and fauna ecosystems are in decline. – Public land management is occurring across a greater area of reserves with an increased focus and funding for pest plant and animal control. – Urbanisation across the catchment is a continued risk to the Catchment's biodiversity. – Change to legislation and investment models are creating uncertainty at a regional scale. 			

Land			MEDIUM	
	<ul style="list-style-type: none"> – The increased awareness of how soils can be improved is being applied on many farms. However, the changing demographic in the south of the catchment is affecting the use of private land, this is likely to increase in coming years. – The purpose and use of private and public land have generally improved (especially grazing in sensitive areas). – Catchment-wide invasive plant and animal management is now mainly 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 from existing and emerging threats like deer in the alps, foothills and plains; feral horses in Barmah National Park (especially when extremely dry) and key weed species in priority areas. Mice and rabbits also had a significant impact in 2020-21. – Stubble burning increased following a good season in 2021 creating further pressure on soils in the Catchment. – There has been an increase use of public and private land for recreation during COVID-19 in Victoria, this has increased people connecting with nature but has also driven rise to some management issues (rubbish etc.) 			

Sustainable irrigation			HIGH	
	<ul style="list-style-type: none"> – Shepparton Irrigation Region (SIR) 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. – While water availability for the environment is improving, high unseasonal flows to meet downstream water demands are creating significant impacts to Goulburn River bank vegetation. – Declining water availability for agriculture due to increasing demands and the impacts of climate change is threatening farm and regional viability, making it extremely challenging for the region to adapt to a future with less water. – Water quality has improved significantly and works and long-term dry conditions have stabilised watertables for now. – Intervention is improving some pockets of native vegetation; however most threatened ecosystems remain at high risk. Native vegetation extent is still poor (less than three per cent). – The mix of land use is changing across the SIR, for example the increase in larger and corporate farms, and impacts on natural resources are unclear. However the fast rate of change is creating some uncertainty. 			

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		Contribution to system function		Risk to system thresholds / tipping point			Long-term strategic implementation	Details page
Critical attribute affecting long-term catchment health ⁱⁱⁱ	1990	2021	Trend 2018-21	With current support	With no support			
Native vegetation extent				VERY HIGH	VERY HIGH	Escalated response ^{iv}	52-58	
Native vegetation quality				VERY HIGH	VERY HIGH	Escalated response ^{iv}	52-58	
Soils for agriculture				MEDIUM	HIGH	Middle	60, 67	
Purpose and use of private land				MEDIUM	HIGH	Watch & adapt	62, 67	
Purpose and use of public land				MEDIUM	HIGH	Watch & adapt	62, 67	
Invasive plants and animals				HIGH	VERY HIGH	Middle	62-63, 67	
Water availability for:								
– The environment				MEDIUM	HIGH	Early	70	
– Agriculture				VERY HIGH	VERY HIGH	Escalated response ^{iv}	70	
Water quality				MEDIUM	HIGH	Watch & adapt	70	
Watertables				MEDIUM	HIGH	Watch & adapt	71	
Native vegetation extent				VERY HIGH	VERY HIGH	Middle	71-72	
Farm and regional viability				HIGH	VERY HIGH	Escalated response ^{iv}	72	

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

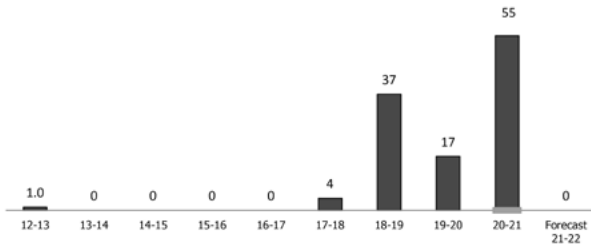
iii. Many critical attributes relate to the 20 to 30-year objectives listed in Goulburn Broken CMA sub-strategies.

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

Outputs achieved 2012-13 to 2020-21 and forecast 2021-22

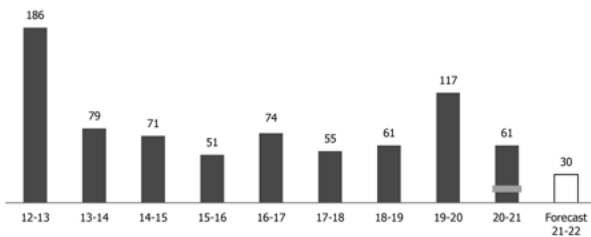
The following outputs were achieved through one or more investment areas (listed on the previous and following pages). They indicate progress towards long-term targets listed in the Regional Catchment Strategy and sub-strategies.

Irrigation drains built, km



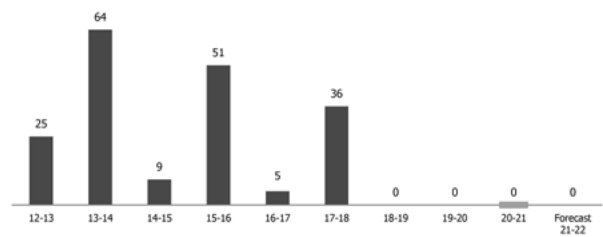
A 2015 review resulted in reduced drainage requirements and renewed priorities. A new hybrid approach is underway (pages 70, 75 and 77).

Whole farm plans prepared, no.



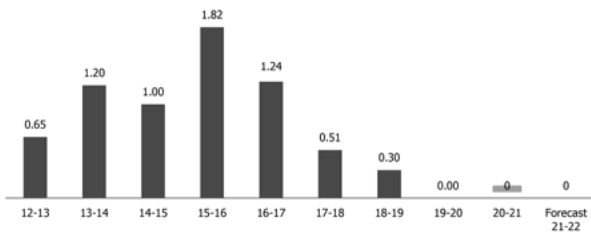
Water-use efficiency has driven whole farm plan numbers in recent years via the Farm Water and Connections Programs. These programs are now completed and funding is reducing, so despite steady demand numbers are expected to be less in future (page 73).

Reuse systems installed, no.



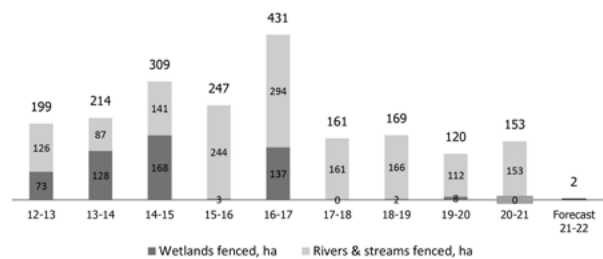
Significant achievements from 2012 to 2018 due to the Farm Water Program. Funding for these works was not available in the Goulburn Murray Irrigation District from 2018-19 (page 77).

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 37, 41 and 45).

Riparian land fenced, ha

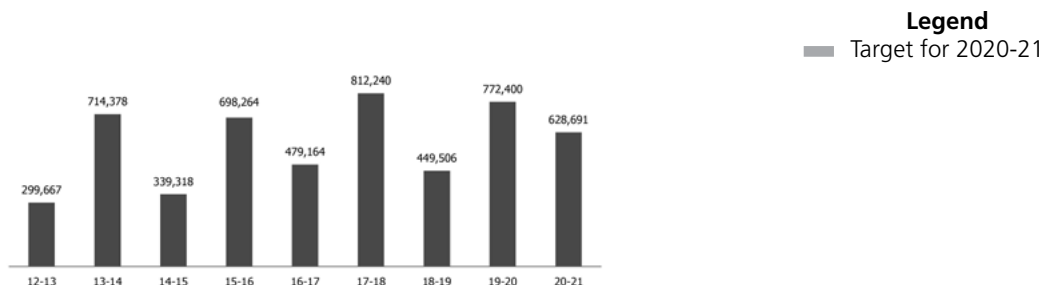


Grazing is now well managed beside long lengths of rivers and streams through fencing from regular and opportunistic fund sources, and through changes in tenure. Significant lengths remain to be improved, and maintenance of previous efforts is becoming a priority (pages 37, 41 & 45).

Note on forecast targets:

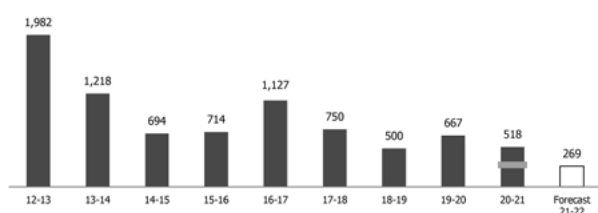
Forecast output targets are generally lower than what was achieved previously because they are based on indicative rather than actual funding received. Forecasts are based on outputs from project submissions for 2021-22 and funded projects as at June 2021. Forecasts may change as new funding opportunities arise and project submissions are negotiated.

Environmental water use, ML



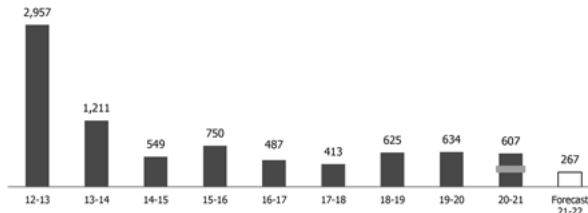
Annual environmental water use is influenced by seasonal conditions and environmental water availability (page 43).

Remnant vegetation fenced, ha



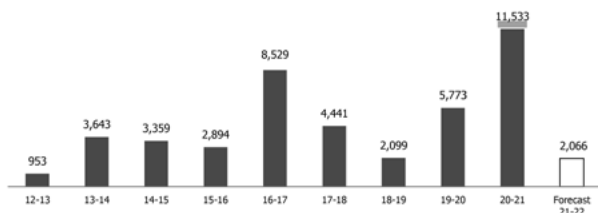
Australian and Victorian Governments are no longer including the output 'remnant vegetation fenced ha', and instead are using 'revegetation natives' as the output for fenced remnants. Remnants are seen as naturally regenerating plantings (pages 58 & 67).

Indigenous revegetation (planted), ha



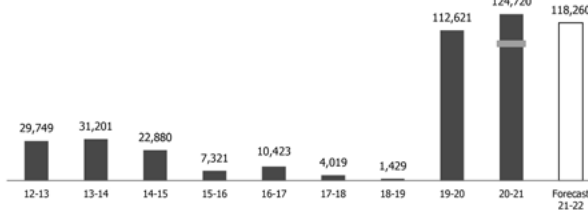
Revegetation continues to be important in creating resilient landscapes through connectivity projects (pages 58 & 67).

Weeds treated, ha



Weed control is a focus for the Victorian and Australian Governments and Indigenous works crews are delivering much of the work (page 31 & 67).

Pest animal control, ha



DELWP's Biodiversity Plan 2037 is driving an increase in the focus on pest animal control (page 63-64 & 67).

Annual scorecards

Indicative investment and gross output performances in investment areas

Investment area ⁱ	Investment ⁱⁱ (including partnership funds)				2020-21 performance ^{iv} (outputs)	Details page
	2018-19 \$000	2019-20 \$000	2020-21 \$000	Forecast ⁱⁱⁱ 2021-22 \$000		
Community and the Environment						
Community ^{v, vii}	705	803	926	796	On target	28
Sustainable irrigation	5,509	7,038	4,074	3,655	On target	68
Waterways	3,997	4,283	4,868	5,919	Exceeded target	34
Floodplain management	940	836	1,025	818	On target	47
Biodiversity	2,612	2,689	2,876	2,402	Exceeded target	52
Land	435	428	622	480	Exceeded target	59
The Business (Corporate)						
Governance ^{vii}	1,422	1,566	1,488	1,463	On target	88
Human resources ^{vi}	5,598	5,995	6,108	6,600	On target	80

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 2021-22 as at June 2021.

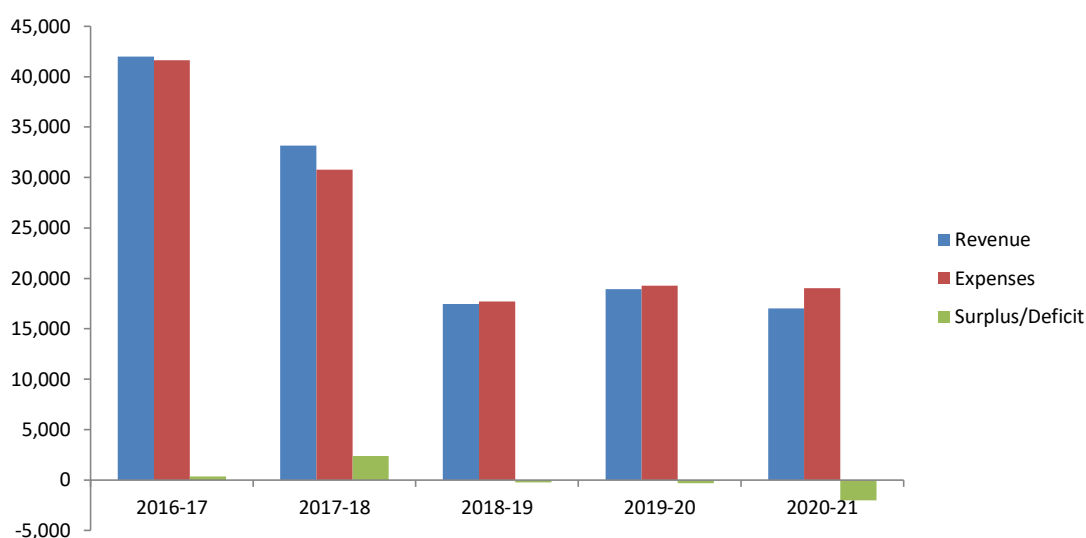
iv. Performance ratings are based on outputs achieved as listed under investment area details in this annual report. Targets are determined by considering levels of government funding, as listed in the Corporate Plan and any subsequent adjustments over the financial year. Outputs are described in Appendix 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 2016-17 to 2020-21, \$000 ⁱ



i. See Financial results summary on page 100 for details.

Aggregate output performance across all investment areas in 2020-21

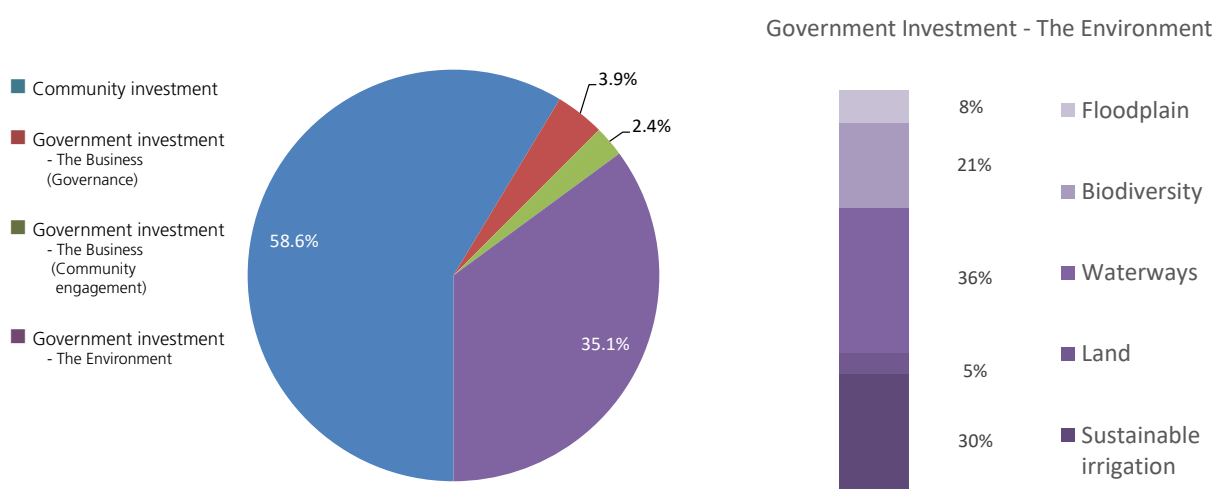
Output ⁱ	Achieved	Target ⁱⁱ	Performance	
			% achieved	Rating
Remnant vegetation fenced, hectares	518	289	179	Exceeded target
Wetlands fenced, hectares	0	0		-
Rivers and streams fenced, hectares	153	0		Exceeded target
Riparian land fenced, hectares	153	0		Exceeded target
Long-term conservation agreements, hectares ⁱⁱⁱ	11	75	15	Well below target
Indigenous revegetation planted, hectares	607	325	187	Exceeded target
Irrigation drains built, kilometres	55	0		Exceeded target
Reuse systems installed, numbers	0	0		-
Laser levelling, hectares	3,676	683	538	Exceeded target
Groundwater pumps installed, numbers	0	0		-
Weeds treated, hectares	11,533	11,889	97	On target
Pest animal control, hectares	124,720	102,643	122	Exceeded target
Environmental water use, megalitres	628,691	0		Exceeded target
River or stream bed and bank protection actions, kilometres	0	0		-
Fishway structures installed and barriers modified, numbers	0	0		-
Threatened species projects, numbers	0	0		-
Whole farm plans prepared, numbers	61	15	407	Exceeded 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.

Descriptions of output performance

Investment area details in the community and environment section pages 20 to 79 describe actions undertaken in 2020-21 and illustrate integration between programs, government agencies and priorities, regional authorities, community organisations and individuals.

Goulburn Broken investment share ^{i, ii}



- i. See bar chart on page 29 for cost-sharing details.
- ii. See investment and gross output performance in investment areas table on page 18 for more detail.

The Regional Catchment Strategy, resilience and climate change

Compiled by Kate Brunt, Ashley Rogers and Rod McLennan.

This section reports on the planning approach and implementation against objectives of the Goulburn Broken Regional Catchment Strategy 2013-2019 (RCS), the Goulburn Broken CMA Corporate Plan 2020-21 and progress towards the renewal of the Goulburn Broken RCS. The Goulburn Broken RCS 2013-2019 remains the overarching strategy until the renewal process is complete late in 2021. It also 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 and 2013 and is currently undergoing renewal.

The resilience approach

In recent years, the Catchment's communities and environment have been severely tested by fires, droughts, floods, the global financial crisis, 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. Goulburn Broken CMA follows key principles for developing the general resilience of the Catchment:

1. Develop a complexity perspective – shifting from a linear perspective to a complexity perspective recognising systems.
2. Govern for change – governance approaches matched to the dynamics of the Catchment.
3. Design for flexibility – design our business to be flexible, mobile, moveable and compartmentalised.
4. Foster self-organisation, participation and openness to change – allow for self-organisation and local solutions.
5. Manage complexity – consider under or over connections which can present risks to the business.
6. Orientate towards leverage and tipping points – tipping points provide a clear focus for managing systems and leverage points can create the change.
7. Value redundancy, backups and buffers – these provide shock absorption capacity and a source of recovery.

8. Retain and build diversity – multiple response options and sources of innovation.
9. Learn for change – forward-focused learning that can drive adaptation and transformation.

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

Regional Catchment Strategy 2013-2019 objectives hierarchy and sub-strategies

Goulburn Broken CMA has completed a review of the Goulburn Broken RCS 2013-19, in preparation for the renewal of the strategy. The review involved a desktop analysis of progress towards natural resource management long-term targets, strategic objectives, priorities and management measures contained within the Goulburn Broken RCS 2013-19. The Review also provided an opportunity to identify areas that require further attention and initiatives that may need to be considered in the Goulburn Broken RCS renewal phase (2019-21).

The Review highlighted what had changed (positive and negative) and needed to be considered in the renewal of the Goulburn Broken RCS. Some changes included: increased population in areas commuting to Melbourne, changes in the values of commodities resulting in significant water movement out of the Catchment, increased support for greater Traditional Owner involvement in natural resource management, the impact of climate change, and the increase in pest animal populations (deer and horses).

The Review also highlighted considerations for the renewal of the Goulburn Broken RCS and are summarised under the following themes: management measure, draft RCS renewal guidelines, implementation of the Goulburn Broken RCS and data needs around trend and thresholds.

In addition to the review, we've also engaged with stakeholder advisory groups to understand how effective the current Goulburn Broken RCS has been, areas for improvement, their values and aspirations for NRM, and what's changed in the past six years. Goulburn Broken CMA also commissioned a socio-economic analysis of the Catchment by Neil Barr and Natural Decisions to understand the economic and social trends and changes occurring in the Catchment. All of this background information identified areas for further research and the Goulburn Broken RCS Renewal process.

Goulburn Broken Regional Catchment Strategy (RCS) renewal

During 2020-2021 the Goulburn Broken CMA coordinated the renewal of the Goulburn Broken RCS due to be submitted to the Minister October 2021. This RCS will ensure pathways are identified to best meet future challenges and opportunities and is relevant to the Goulburn Broken Catchment. While Goulburn Broken CMA is responsible for the coordination of the Goulburn Broken RCS, it is a strategic document for all organisations, groups and individuals contributing to integrated catchment management in the Goulburn Broken Catchment.

A resilience approach has been used to guide the Goulburn Broken RCS Renewal. The Goulburn Broken RCS is being developed in line with guidelines provided by the Victorian Catchment Management Council (VCMC), this including the statewide Outcomes Framework.

In 2020-21 several critical pieces of work were undertaken to provide the basis for engagement activities and they underpin the Goulburn Broken RCS with rigour. These included the development of the Regional Insights paper, four thematic papers (land, biodiversity, water and community) and local plans papers for all of the local areas identified in the RCS.

During 2020-21 extensive engagement activities were undertaken and included webinars, fact sheets, over 40 on-line engagement workshops through existing forums and specific Goulburn Broken RCS online workshops, both local area and theme based. This resulted in over 1,000 comments that have been incorporated in the draft Goulburn Broken RCS. The project produced a high-quality draft online Goulburn Broken RCS released at the end of June 2021. The drafting process also incorporated a peer review process and both Registered Aboriginal Parties covering the whole of the Goulburn Broken Region, have had direct input into both the Regional Insights Paper and the Draft Goulburn Broken RCS.

Renewal process has provided a platform for the region to come together (virtually) to plan a way for NRM. In addition, the Goulburn Broken CMA who applies a resilience approach to strategic planning have used all the engagement activities to build capacity around resilience thinking – a critical service during COVID-19.

Goulburn Broken CMA is also working to integrate Traditional Owner perspectives and knowledge as part of the renewal process, which relates to their physical and spiritual connection to Country. This is in line with the Goulburn Broken CMA's obligations under the *CaLP Act* and other agreements such as the Aboriginal Participation Guideline for Victorian Catchment Management Authorities, the Goulburn Broken CMA MOU with YYNAC and the Taungurung Recognition and Settlement Agreement.

The Goulburn Broken RCS 2021-2027 will be a web-based strategy and is developed in line with the guidelines provided by the Victorian Catchment Management Council and the Goulburn Broken community's aspirations.

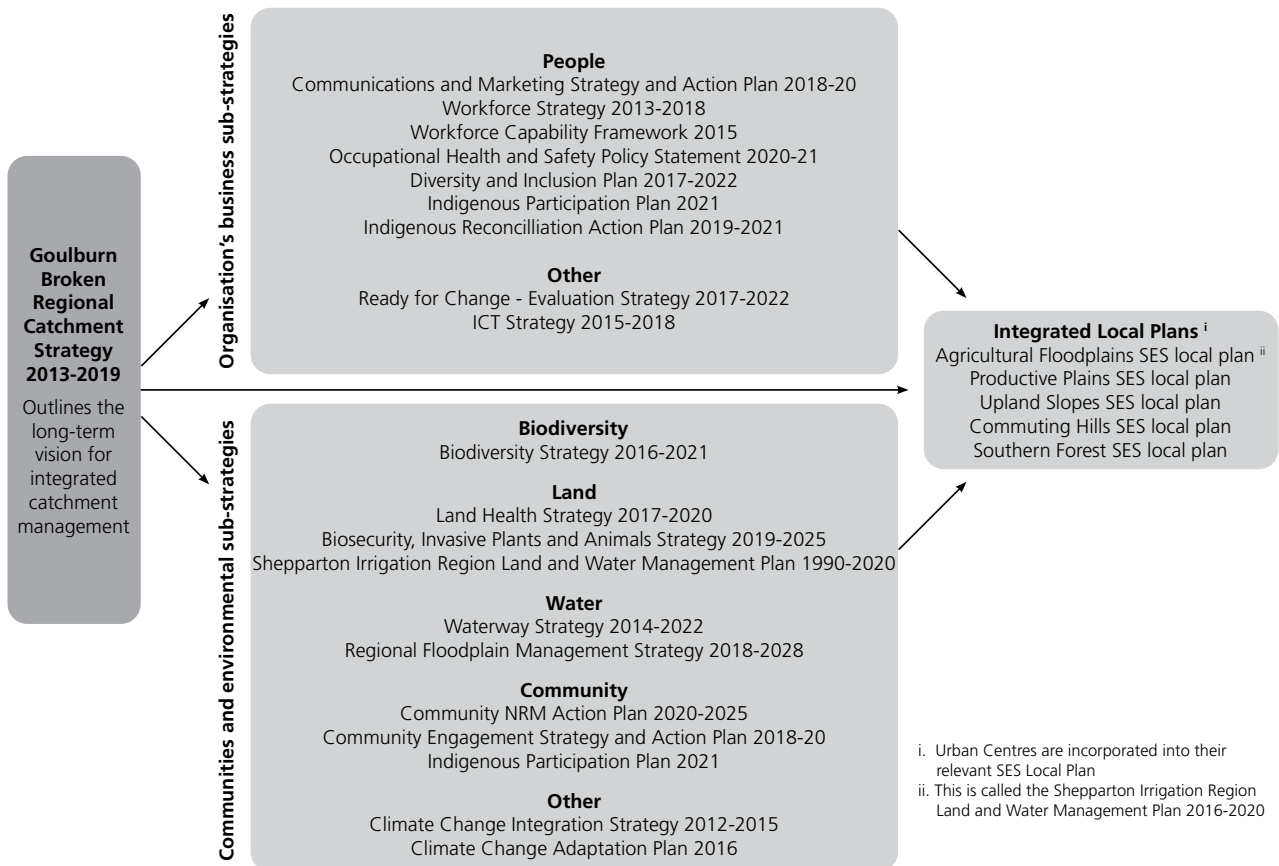
Corporate Plan 2020 -2021

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. 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 (page 68)
- Land and Biodiversity (page 52)
- Waterways and Floodplain (page 34)
- Community (identified as 'Corporate' in the Corporate Plan page 28).

Regional Catchment Strategy and sub-strategies structure ⁱ

i. see Appendix 8 for the evolutionary status of the sub-strategies.



Victorian Government priority policy areas

As outlined in the Minister's letter of expectation.

Victorian Government priority policy area Measure:	Goulburn Broken CMA planned contribution to priority area in 2020-21	Details page
Climate change – Active investigation into new opportunities to sequester carbon by:		
<ul style="list-style-type: none"> – Exploring opportunities to provide carbon offsets. – Progress on climate change adaptation initiatives outlined in climate change and catchment strategies. 	<p>Goulburn Broken CMA participates in the Victorian NRM Planning for Climate Change Forum and will continue to progress the Catchment Carbon Offsets trial. Goulburn Broken CMA will also continue to have in-put into the Water Sector Carbon Offset Working Group through the Statewide Climate Change Coordinator.</p> <p>Goulburn Broken CMA will continue to work with Taungurung Land and Waters Council to implement the findings of the 'Traditional Owners and CMA partnership opportunities for carbon sequestration' project. The outcomes of the project will be discussed with Yorta Yorta Nation Aboriginal Corporation and opportunities identified.</p>	27
<i>Aligned to Goulburn Broken CMA outcome - Responsive and effective Goulburn Broken CMA, partners, and communities.</i>		
Waterway and Catchment Health – Improve catchment health and resilience		
<ul style="list-style-type: none"> – 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. – Deliver integrated catchment management in line with Water for Victoria and building on the legacy of Our Catchments Our Communities with strengthened performance across environmental, social and economic outcomes. – Report on Catchment Partnership Agreements for your region in accordance with the Framework for Catchment Partnership Agreements. 	<p>Goulburn Broken CMA will renew the Regional Catchment Strategy in line with the guidelines and through extensive engagement. Goulburn Broken CMA will implement a resilience approach to RCS planning, this builds on local Social Ecological Planning undertaken through Our Catchment, Our Communities.</p> <p>Goulburn Broken CMA will also contribute to the annual CMA Actions and Achievements report which highlights environmental, social, cultural and economic outcomes (see www.gbcma.vic.gov.au).</p> <p>The large-scale projects outlined in Water for Victoria and anticipated to be funded through the 4-year Victorian Water Programs Investment Framework will be delivered to the extent funded. Specifically, this is the continuation of the Strathbogie Streams and the Bogies and Beyond project and the initiation of the 'Waring' – Goulburn River flagship project.</p> <p>Goulburn Broken CMA is building on the success of the Our Catchments, Our Communities project 'Bogies and Beyond'. Key learnings from the project will be incorporated into RCS renewal and key activities will be maintained through the partnerships that have been developed during the project.</p> <p>Goulburn Broken CMA will report on the Catchment Partnership Agreement through the Goulburn Broken CMA Annual Report.</p>	20-21, 29-32, 41-42, 57
<i>Aligned to Goulburn Broken CMA outcome - The waterways and wetlands of the Goulburn Broken region are vibrant and resilient so that communities can enjoy the values and benefits they provide.</i>		

Victorian Government priority policy area Measure:	Goulburn Broken CMA planned contribution to priority area in 2020-21	Details page
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Water for Agriculture – A productive and profitable irrigation sector and vibrant and resilient regional communities that adapt		
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<ul style="list-style-type: none"> – Promote sustainable irrigation management practices to support the growth and viability of regional communities. – Planning and coordination activities to manage salinity, waterlogging and water quality in agricultural areas. – Providing flexibility for agriculture to continue to adapt to change and help the sector do more with less water. 	<p>Goulburn Broken CMA will continue to deliver onground works to manage issues around surface drainage and sub surface-drainage with Goulburn Murray Water.</p> <p>Goulburn Broken CMA will manage and report on salinity issues as per the requirements under the Basin Salinity Management 2030.</p> <p>Goulburn Broken CMA through its program delivery will continue to deliver Whole farm planning, support extension activities and related incentives such as soil moisture monitoring and improved energy system understanding and land use understanding across the irrigated landscape</p> <p>Goulburn Broken CMA will continue to work with Catchment Partners to develop a program to assist with the modernisation of farm systems that leads to optimised public irrigation system assets and reduced water losses.</p> <p>Improving on-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. 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 its key interventions.</p> <p>Activities to increase knowledge around the impacts of land use changes and complementing it by supporting implementation of appropriate agricultural practices will continue.</p> <p>The expansion of the Agricultural Redevelopment Coordination will be a key component of the program over the next three years.</p>	71-76
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Aligned to Goulburn Broken CMA outcome - The Shepparton Irrigation Region community leads Australia in producing food in harmony with the environment.

Community engagement and partnerships – A strong engagement focus that is a cornerstone of all CMA's functions		
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<ul style="list-style-type: none"> – Continue to build extensive, effective, and consistent approaches to community engagement and partnerships in regional planning and implementation. – Work collaboratively with organisations and communities to strengthen engagement approaches and capacity. 	<p>The RCS renewal will involve extensive community and partner engagement. This will occur through existing networks, however it also aims to engage new parts in NRM.</p> <p>Supporting, promoting, and building capacity in our community networks across the Catchment. Key focus and community-led groups include:</p> <ul style="list-style-type: none"> – the Shepparton Irrigation Region (SIR) People Planning and Integration Committee – Landcare Network Chairs Group – Goulburn Broken Indigenous Participation Group – Local Government Biodiversity Reference Group – Land and Biodiversity Implementation Forum – Environmental Water Advisory Groups (3) – Community driven Local SES Planning. <p>Note: these groups feed into a much larger community network i.e. 96 community NRM groups, 12 NRM networks, over 5,089 members.</p> <p>Focus on the Goulburn Broken CMA-led Senior Combined Partners forum that brings together the leaders from across the agencies that are relevant to the irrigation landscape in the SIR and continuation of the Goulburn Broken Partnership Team.</p>	20-21, 29-32, 76
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Aligned to Goulburn Broken CMA outcome - Responsive and effective Goulburn Broken CMA, partners, and communities.

Victorian Government priority policy area Measure:	Goulburn Broken CMA planned contribution to priority area in 2020-21	Details page
Recognise and support Aboriginal cultural values and economic inclusion in water sector – Effective engagement of Traditional Owners		
<ul style="list-style-type: none"> – Aim to increase the number of engagements with Traditional Owners in water planning and management and reporting outcomes. – Work collaboratively with traditional owners organisations and communities to strengthen engagement approaches and build their capacity. 	<p>Goulburn Broken CMA will continue to facilitate the Indigenous Consultation Forum, including with Yorta Yorta Nation Aboriginal Corporation and Taungurung Land and Waters Corporation with a focus on the renewal of the RCS.</p> <p>Goulburn Broken CMA will also engage both Registered Aboriginal Corporations to carry out onground works on country, through State and Federally funded projects.</p> <p>Goulburn Broken CMA is seeking Yorta Yorta work crew Woka Walla's involvement in the delivery of the Goulburn River Environmental Flow monitoring.</p> <p>Goulburn Broken CMA recognises Taungurung Land and Waters Corporation recent settlement case and will work to support TLaWC plans to work on Country.</p> <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>Goulburn Broken CMA is seeking involvement from Traditional Owners in the new flow study for the lower Goulburn River.</p> <p>Importantly 2020-21, saw the early phases of implementation of the Taungurung Recognition and settlement agreement. 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>	20-21, 31, 40
<i>Alignment to Goulburn Broken CMA outcome - Responsive and effective Goulburn Broken CMA, partners, and communities.</i>		
Recognise recreational values - support the well-being of rural and regional communities by considering recreational values of waterways		
<ul style="list-style-type: none"> – Water services that explicitly consider recreational values, within existing frameworks. – Engagement with the community to identify and prioritise opportunities to deliver recreational objectives relating to the management of water and waterways. – Accessible and user-friendly information for recreational users about river and waterway conditions to help community members plan their recreations activities. – Collaboration with other organisations and government agencies to explore and progress opportunities to support recreational values. 	<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 such groups have increased advocacy for waterway health and have brought further investment and effort into onground works. Over the next twelve months we will continue to seek opportunities to understand and deliver recreational values across all aspects of waterway management including environmental flow planning, riparian vegetation enhancement and instream habitat improvement.</p> <p>The understanding of the farming community of the importance of the environmental watering of key features has improved but is continually challenged by the affordability of water used for productive agriculture.</p>	40-41, 74
<i>Alignment to Goulburn Broken CMA outcome - The waterways and wetlands of the Goulburn Broken region are vibrant and resilient so that communities can enjoy the values and benefits they provide.</i>		

Victorian Government priority policy area Measure:	Goulburn Broken CMA planned contribution to priority area in 2020-21	Details page
Resilient and livable cities and towns – contribute to healthy communities and supporting resilient environments by:		
<ul style="list-style-type: none"> – Collaborating with water corporations and local government, including the participation in Integrated Water Management Forums, to enhance public spaces through integrated water management in existing and new urban environments. – Participating in the development and implementation of integrated water management plans, particularly through prioritising measures to enhance urban waterway values. 	<p>Goulburn Broken CMA will continue to actively participate in the Goulburn Broken Integrated Water Management Forum. This will support delivery of, and identify new collaborative projects for consideration in the Goulburn Broken Strategic Directions Statement.</p> <p>The GMID Resilience Strategy has been developed and is now a key tool for the engagement of the broader regional community where it has been seen as the road map to success. It is through a strategy to shift the region on a path to greater collective strength under the resilience framework. This will require a collective shift in a way of operating from all stakeholders to a more collective effort.</p>	40, 75-76
<i>Alignment to Goulburn Broken CMA outcome - The waterways and wetlands of the Goulburn Broken region are vibrant and resilient so that communities can enjoy the values and benefits they provide</i>		
Leadership, diversity and culture – reflect the diverse needs of the community		
<ul style="list-style-type: none"> – Developing strategies and goals that will increase cultural diversity in the workforce and gender equity in executive leadership. – Encouraging staff participation in the Victorian Public-Sector Commission 'People Matter Survey' or equivalent survey. 	<p>Implement the 2017-2022 Diversity & Inclusion Plan for the Goulburn Broken CMA.</p> <p>Development Flexible Workforce Strategy.</p> <p>Renewal the Goulburn Broken CMA Workforce Strategy.</p> <p>Implement the Goulburn Broken CMA Reconciliation Action Plan.</p> <p>Biennial participation in People Matter Survey.</p> <p>Annual Board Performance Assessment and report, including a skill matrix assessment.</p>	80-85, 99, 155
<i>Alignment to Goulburn Broken CMA outcome - Responsive and effective Goulburn Broken CMA, partners, and communities.</i>		
Improved performance and demonstrate results against outcomes:		
<ul style="list-style-type: none"> – Collaborating with DELWP to improve reporting systems and processes. – Demonstrate outcomes of government investment into waterways and catchment health. – Delivering efficiency through shared services, smarter procurement, and lower-cost technology. – Commit to working collectively via Vic Catchments membership to strengthen collaboration and performance in the catchment management sector in Victoria. – Commit to the delivery of Our Catchments Our Communities Integrated Catchment Management program, including supporting the development of, and be signatories to, a new Catchment Partnership Agreements. 	<p>Goulburn Broken CMA maintain the policies, procedures, and resources to deliver on reporting and funding obligations.</p> <p>Goulburn Broken CMA will continue to be an active member of the Regional Investment Coordinators Group which collaborates with DELWP on reporting process and systems.</p> <p>Goulburn Broken CMA continues to work along with the nine other CMAs to identify arrangements to reduce costs through shared services (e.g. GIS) and systems (e.g. Finance), smarter procurement (e.g. VicFleet) and lower-cost technology (e.g. shared firewall) to reduce the impact of the funding environment.</p> <p>Goulburn Broken CMA will continue as a member of Vic Catchments.</p>	92-96, 118,

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, the 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 the 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 the 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 page 146) and to summarise progress via long-term scorecards since 2005-06 (see pages 12-15) are important in developing a uniform language and framework, enabling comparisons over time and helping the 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, $\text{Outputs} \times \text{Assumptions} = \text{Outcomes}$, 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 the Goulburn Broken CMA to invest in and access research and development activities and information continues to be a priority. Efforts during 2020-21 are highlighted within each investment area section of this annual report.

What's next?

- Begin supporting the implementation of the new Regional Catchment Strategy, this will include the development of an implementation plan and an engagement plan. There will be a focus on the RCS pledge and increasing buy-in for the implementation of the RCS.
- Continue implementing and reviewing sub-strategies, as has been done for more than two decades, aligning them with the RCS and its resilience approach and emphasis on social-ecological systems. Each sub-strategy's context varies and continuously changes, so they are renewed independent of the over-arching RCS renewal cycle. Sub-strategies are developed in consultation with government and community organisations and individuals, providing details for investment plans and priorities.
- Continue building knowledge of the Catchment's critical thresholds and tipping points, including how to monitor and use them in NRM planning, especially in discussions around transformation and implementing an adaptive management framework.

Climate change

Climate change impacts significantly on the resilience of the Catchment's natural resources, and therefore across all Goulburn Broken CMA investment areas.

Climate change projections and projected impacts

Murray Basin average temperatures in all seasons are projected to continue to increase and less cool season rainfall is projected (with high confidence) by 2090. Rainfall will remain unchanged in the warm season (medium confidence).

Natural variability is projected to dominate for the near future.

Even though mean annual rainfall is projected to decline, heavy rainfall intensity is projected (with high confidence) to increase, along with harsher fire weather (Timbal, B et al. 2015. Murray Basin Cluster Report. CSIRO and Bureau of Meteorology, Australia).

Land

Climate change is likely to affect the distribution and viability of agricultural enterprises, such as cropping and grazing, because of extreme weather and climate events and changes in pest and disease distribution.

Agricultural industries will need to adapt to a changing climate to be viable in the long term.

Biodiversity

Reduced water availability and increased temperatures will drive biodiversity's response to climate change.

Climate change is anticipated to exacerbate existing pressure on biodiversity, primarily related to habitat loss, resulting in flora and fauna being unable to move through fragmented landscapes, increasing extinction risks through elevated inbreeding and subsequent loss of subpopulations.

Predicting how populations, species and communities will respond is challenging because each is likely to be different. Almost all biodiversity will be affected by climate change, with alpine, terrestrial and freshwater ecosystems likely to be the most vulnerable.

Waterways

Climate change is projected to exacerbate pressure on water condition.

Most water condition indicators were neutral or trending negatively (the former reflecting NRM program outcomes and water policy reforms).

Terrestrial and freshwater ecosystems are most vulnerable to climate change effects.

Climate change will particularly affect water supply, use and management. The interactions of environment, water policy and use, community desires and increased unpredictability of the amount, seasonality and distribution of water are complex.

Climate change is anticipated to lead to new pressures through rainfall and snow regime changes, reduced average runoff and increased evaporation rates from increased air and water temperature.

Climate change planning in the Goulburn Broken Catchment

Goulburn Broken CMA aims to be a leader in helping the community and natural environment respond and adapt to climate change.

It is difficult to communicate and respond to the complex, uncertain and interconnected interactions between climate, natural resources, industries and communities. Responses to climate change require complex modelling, strategies and adaptive management.

The Goulburn Broken CMA's policy statement on climate change is:

'In dealing with climate change and the likely impacts, the Goulburn Broken CMA will focus on adaptation strategies to increase catchment resilience; greenhouse gas sequestration activity (e.g. carbon brokering) will be engaged for the purpose of assisting adaptation responses; and mitigation initiatives led by local government will be actively supported.'

Goulburn Broken CMA implements this policy statement via its Climate Change Integration Strategy 2012-2015, which updated the 2007 position paper, and which has outcome aims that remain current (see below). Implementation is supported by the Climate Change Adaptation Plan for Natural Resource Management (NRM) in the Goulburn Broken Catchment 2016, which identifies:

- priority landscapes for climate change adaptation and mitigation in the context of improving the resilience of natural resources
- options for change adaptation and mitigation, including carbon sequestration, with a focus on priority landscapes
- risks to catchment processes from carbon sequestration activities and mitigation actions.

This adaptation plan has been acknowledged as important in implementing Victoria's Climate Change Adaptation Plan.

Climate change implementation responses

Goulburn Broken CMA is committed to continuing to implement activities that support the following Climate Change Integration outcomes:

- 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 footprint.

2020-21 performance

As a result of reduced specific funding for climate change, most actions are implemented through statewide collaboration, facilitated by the statewide climate change coordinator and managed through the NRM Planning for Climate Change Vic forum. Actions include:

- Integration of climate change into the development of the Goulburn Broken Regional Catchment Strategy has been significant, this has followed down to local planning and will inform sub-strategy renewals.
- Goulburn Broken CMA CEO is now the portfolio lead for climate change for CMAs across the state.
- Goulburn Broken CMA is a member of the steering committee for the Carbon Sequestration Analysis Project.
- Goulburn Broken CMA is exploring what partnerships with carbon developers could look like and what the opportunities are for NRM outcomes.
- 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?

- Implement the outcomes of the Goulburn Broken CMA internal Climate Change Audit and renew the Goulburn Broken CMAs Climate Change Integration Strategy.
- Work with DELWP to have input into the implementation of Regional Climate Change Adaptation Plan and NRM Sector Adaptation Plan.
- Work with Traditional Owners to pursue viable carbon sequestration projects.
- Continue supporting Victorian CMAs' Regional NRM Planning for Climate Change Forum and the Victorian CMA statewide climate change coordinator, and associated projects.

Investment area - Community

Compiled by Kate Brunt, Tony Kubeil, Gaye Sutherland, Fiona Johnson Fiona Lloyd, Darelle Backway, Zuzanna Lelito, and Neville Atkinson.

Long-term and annual scorecard ⁱ

2020-21 performance	On target		
Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	MEDIUM

Traditional Owners are participating more in high-level decisions supported by mechanisms such as the Recognition and Settlement Agreements. There is significant scope for greater involvement if more funding becomes available.

Communities, partner organisations, farmers and others have achieved significant onground changes with appropriate levels of government support.

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 (including Landcare) and individuals is uncertain and volunteers are ageing and participation in government programs is dropping off in some locations.

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. However, COVID-19 has limited engagement in some sectors of the community.

The Goulburn Broken community is changing and as a result there is a shift in who and how the community influence and lead.

Resilience assessment					Long-term strategic implementation ^v	
Critical attribute affecting long-term catchment health	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}		Start	Stage
	1990	2021	Trend 2018-21	Long-term (10+ years)		
				Current support ^{vi}	No support ^{vi}	
Community capacity to influence and lead	●	●	▲	HIGH	VERY HIGH	1990 Escalated response ^{vii}
Community capacity to be involved and act onground	●	●	▲	MEDIUM	HIGH	1990 Watch & adapt

The certainty rating for Community is medium due to well established 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 2021.
- 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 ⁱ, \$000

2018-19	2019-20	2020-21	2021-22 ⁱⁱ
705	803	926	796

- i. The approach to calculating Community was revised in 2020-21 and prior years were recalculated for consistency.
- ii. Forecast is based on the Corporate Plan 2021-22.

Strategic references

The Goulburn Broken Community Engagement Strategy and Action Plan 2018-2020 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 them 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 5 for the list of strategic documents related to community engagement.

Background

The future of the 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 page 29). Influencing how others invest is therefore an important activity for the Goulburn Broken CMA.

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

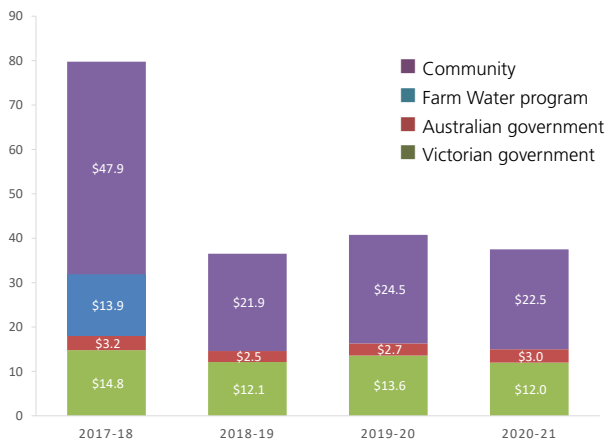
Catchment condition - Community (since 1990)

Goulburn Broken Catchment communities' resilience benefit 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 communities ability to deliver on ground and to influence and lead NRM has been somewhat diminished.

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 has supported Traditional Owners to develop '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 Regional Catchment Strategy (RCS) Building the capacity of the Traditional Owners to be self-determining has been a priority with specific capability building events and ongoing support for Traditional Owner-led natural resource management businesses and employment programs.

Major contributions to natural resources management, \$million



Long-term strategy implementation progress and 2020-21 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, so they have adequate capacity.

Goulburn Broken CMA works in partnership with landholders, Traditional Owners, school children, community NRM groups 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.

Community capacity

Long-term (Corporate Plan) objective: By 2021, deliver 300 capacity building events.

Community capacity activity includes:

- Performance of landholder (especially farmer) works consistent with the RCS, with works on thousands of sites covering thousands of hectares and multiple benefits. Onground works generally were on target for the given budget. See bar charts page 16 and 17.
- 35 per cent of Goulburn Broken CMA's Municipal Catchment Coordinator position is funded by the three municipalities in the Shepparton Irrigation Region. These municipalities also contribute 17 per cent of funding for the Public Salinity Works operation and maintenance costs and in some circumstances fund road structures on Community Surface Drains. See further information on pages 75 and 76.
- Community organisations: 96 active groups, 12 community NRM networks; 3,207 members plus 3,238 volunteers (2020-21 Landcare survey); see also Regional Agriculture Landcare Facilitator (page 64).
- The Victorian Landcare grants were not delivered in 2020-21 as a result of COVID-19. Delivery of the 2019-20 grants was greatly affected and as a result a statewide extension of delivery time to June 2021 was provided.
- \$1.2 million for 53 Victorian government and Australian government grants to community and partner organisations (see table page 31 for details).

Increasing stakeholder investment in, and support for, the Goulburn Broken RCS through 'Our Catchment, Our Communities' and associated programs. There have been more than 1000 items of feedback from Traditional Owners and a range of community groups and individuals, during the Goulburn Broken RCS renewal process. This feedback has been critical in shaping the priority directions and outcomes of the next iteration of the strategy.

Awareness and information highlights 2020-21

- 20 media releases prepared with almost 100 per cent take up.
- Monthly column in the Country News (reaching more than 44,000 households).
- Monthly session on ABC Goulburn Murray's breakfast show discussing all things flora and fauna.
- Monthly 'info-graphic' promoting the multiple/shared benefits of environmental flows along the lower Goulburn River, targeting urban recreational users.
- Continued increase in social media followers (from June 2020), with Facebook 'page likes' reaching 3,206 people (up from 2,861) Twitter followers increasing to 1,812 (up from 1,735) and Instagram followers increased to 543 (up from 361 followers). A LinkedIn account is now operating providing another platform for attracting employees, promoting the benefits of working for the Goulburn Broken CMA, sharing news and creating new networks.
- Increased emphasis on creating engaging content using video and apps that can be shared and distributed across multiple platforms. This proved particularly important during Coronavirus (COVID-19) as workshops moved to online delivery.
- Promotion of the combined efforts of all 10 CMAs via the #CMAsGetItDone social media campaign to highlight, primarily to investors, the sector's genuine commitment to collaboration and community engagement.

- The occasional Connecting Community and Catchment e-newsletter has more than 1,000 subscribers and the sustainable agriculture-focused Landcare Links produced by the Regional Agriculture Landcare Facilitator continues to grow its base (1,500 subscribers).
- Continued to review and update content on the Goulburn Broken CMA website to make it more accessible, interactive and user-friendly. On average there were 7,964 page views a month, with the floodplain/waterway management and Traditional Owner sections the most visited.

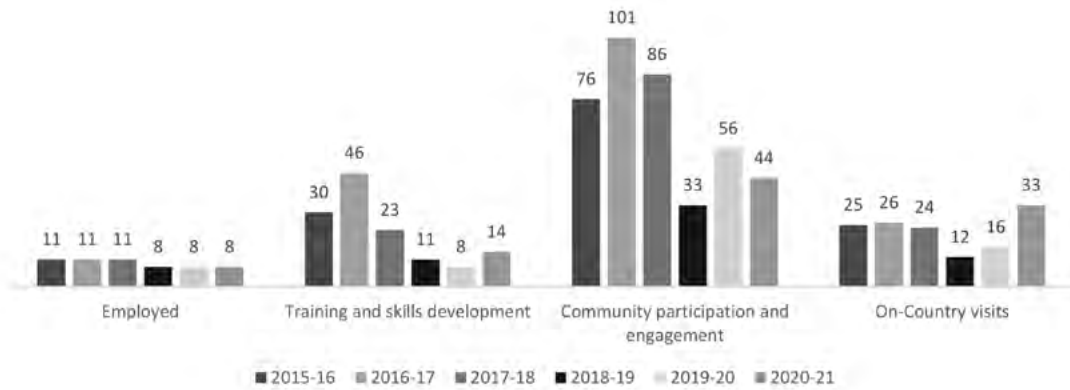
Community volunteer contributions in 2020-21

Activity	Hours ⁱ
Onground works	9,557
Learning and training	4,118
Promotion and communications	5,392
Planning and other administration	2,175

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

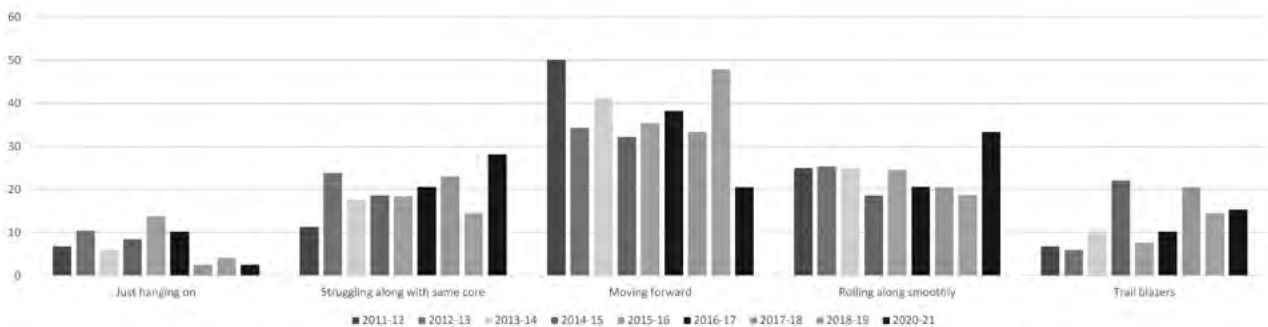
Traditional Owners involved in Goulburn Broken CMA projects

no. people



Landcare group health status

Data from annual surveys of Landcare groups.



Traditional Owner capacity, engagement and involvement

Long-term objective: More Yorta Yorta and Taungurung people in sustainable employment, traineeships, and Goulburn Broken CMA-funded projects

Since 2015, Traditional Owner capacity has grown significantly through Goulburn Broken CMA projects involving development of Yorta Yorta Nation Aboriginal Corporation (YYNAC) and Taungurung Land and Waters Council (TLaWC) NRM work teams. Both YYNAC and TLaWC continue to expand their respective NRM businesses and build capacity of staff engaged in their teams, delivering on key National Landcare Programs including the Barmah Ramsar project, the Mountain Pygmy-possum project and the Linking Landscapes project.

Training and engagement opportunities are actively sought with Traditional Owners such as the floodplain ecology course and supporting business development through the Follow the Flowers project. In 2020-21 activities have been significantly impacted by COVID-19.

Goulburn Broken CMA has worked actively with landholders and Traditional Owners to ensure whole farm plans recognise significant cultural sites. In 2020-2021 two site visits were organised with the Goulburn Broken CMA cultural heritage advisor to assess potential impacts of farm development works on Aboriginal cultural heritage. This has involved engagement with Aboriginal Victoria's compliance team to gain advice on farm plan implementation and the Aboriginal Heritage Regulations 2018.

Traditional Owner knowledge and language is actively sought after and included in the development of interpretive signage projects, publications, and engagement events with school groups.

Goulburn Broken CMA staff have been actively working in the Mansfield region to raise awareness of the regions Traditional Owners (the Taungurung people) with the Bagungga Indigenous garden developed in collaboration with TLaWC, local community and the Mansfield Secondary College. Funding applications and associated site visits with Museum Victoria were also organised in an attempt

to repatriate stone artefacts back to Country. TLaWC have been engaged through the Mending Mountains for the Pygmy-possum project to present to senior students at Mansfield undertaking environmental studies, on threatened species management and Traditional Owner engagement in caring for Country. A cultural awareness day was also supported with TLaWC and the Hughes Creek Catchment Collaborative Community.

Yorta Yorta field representatives have been engaged in three property visits with private landholders and Devenish, Chesney Vale and Violet Town to document and record localised ethno-historical knowledge of Traditional Owners and to undertake cultural surveys for locating and recording of Aboriginal Cultural Heritage Places. A similar visit has been coordinated with TLaWC community members and a private landholder within the Strathbogie ranges to document and record cultural heritage.

The Mulana nin iyoga walking trail has been completed at Mount Major in collaboration with YYNAC, providing opportunity for raising awareness of the strong connection and cultural significance of this region to the Yorta Yorta people.

Goulburn Broken CMA assisted TLaWC in delivery of the Reedy Lake Project, which engaged 10 TLaWC community members in ecological and cultural surveys to guide future management of this culturally significant wetland.

Long-term objective: Increased use of Traditional Owner Knowledge in Goulburn Broken CMA projects

Goulburn Broken CMA involves all staff and Board members in cultural awareness training to ensure that protocols for engagement and protection of Aboriginal cultural heritage are understood across the organisation, however in 2020-2021 this training has not been possible due to COVID-19 as face to face training is essential.

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.

Total grants paid to community groups and other organisations 2020-21	No. of projects	Amount paid \$ (ex GST)
Australian Government - Regional Land Partnerships Program	21	\$633,320
Australian Government - Other	1	\$24,740
Victorian Government - Biodiversity Response Planning	9	\$237,383
Victorian Government - Our Catchments, Our Communities	2	\$40,624
Victorian Government - Regional Riparian Action Plan	1	\$20,958
Victorian Government - Victorian Landcare Grants	5	\$19,254
Victorian Government - Victorian Water Programs Investment Framework	10	\$182,801
Victorian Government - Other	4	\$23,014
Grand Total	53	\$1,182,094

See Appendix 7 for full list of payments made during 2020-21.

The total grants paid in the table above will not reconcile with the grants paid amount in Note 3.3 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 is made up of the seven NRM 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'.

Although the ability of the Alliance partners to meet and develop new initiatives has been impacted by the coronavirus pandemic both the Indigenous business development and Fish Connections strategy have received funding and implementation commenced.

The Alliance was awarded a \$825,000 grant from the MDBA Native Fish Strategy to deliver native fish outcomes over two years. At a high level, the project has two broad areas, namely:

- Development of a Fish Recovery Plan for the Mid-Murray Floodplain Recovery Reach. The recovery reach spans the Victoria and NSW Murray Floodplain and includes the Murray River, mid- and lower Goulburn River, Broken Creek, Barmah-Millewa Forest Icon Site, upper reaches of the Edwards-Wakool anabranch system and the lower Campaspe River, and
- Selection and restoration of 6-8 wetland sites for recovery of small-bodied wetland specialist fish and freshwater catfish in partnership with Traditional Owners, community groups and key stakeholders.

ARI have been appointed to develop the Fish Recovery Plan and funding prospectus in-conjunction with the Alliance partners and key stakeholders. The plan will be one of four completed across the Murray-Darling Basin in the first year of the MDBA Native Fish Strategy funding,

As part of the project, the first 'Wetland Warriors' forum was held, coordinated by Murray LLS and Edward-Wakool Angling Association, and amongst sharing the latest works and knowledge, sites for onground works were discussed and criteria for selection agreed.

Captive bred southern pygmy perch fish releases have commenced in Deniliquin Lagoons with Murray LLS, Edward-Wakool Angling Association, local council, Deniliquin Sustainability Group (500 fish released) and Black Charlie Lagoon (600 fish) through North Central CMA, Parks Victoria and Yorta Yorta Nations.

Further funding is being sought and an additional grant was obtained through DELWP Icon Species funding (59k) to commence two captive breeding programs for southern purple spotted gudgeon. Broodstock have been collected from Third Reedy Lake near Kerang, in partnership with Native Fish Australia, Australia New Guinea Fishes Association, Aquasave, and Austral Research.

The Alliance provided support to the Outback Academy (as the lead) in the successful preparation of a project proposal (Follow the Flowers) to the Murray-Darling Economic Development Fund. The project supports the six Murray Corridor Aboriginal land-based businesses to develop the initial farm assessments into high level Business Plans and to commence implementation. The project includes \$180,000 for the Tri-State Murray Alliance partners to provide technical support and to act as a central contact point that links the businesses to existing information, services and expertise. Further funding is being secured from Indigenous

Business Australia and other funding is being actively pursued by Outback Academy.

Whole farm plans have been prepared for the six Murray Corridor pilot farms and workshops have been held with Aboriginal farm owners to build agreements for ongoing successful collaboration along the corridor. Training has commenced in skill building for delivery of the Follow the Flowers on farm business objectives.

Given the ongoing pandemic, the Alliance will continue to meet and progress the projects in line with the restrictions as they change and emerge across the three States.

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
- complete the renewal of the Goulburn Broken RCS
- build support of the implementation of the Goulburn Broken RCS
- continuous investigation and development of the best ways to engage with the community to plan at a local scale
- inclusion of a community engagement component in all project planning and development (with a focus on the social-ecological systems)
- Renewal of the Goulburn Broken Community Engagement Strategy and Action Plan 2018-2020 along with the Goulburn Broken Community NRM Action Plan 2020-25
- continued support for statewide and national engagement and communication approaches, such as promoting the benefits of environmental flows
- continued engagement with TLaWC and YYNAC Indigenous Consultation Groups, including neighbouring North East and North Central CMA areas that also include Taungurung and Yorta Yorta Country
- Implementation of Goulburn Broken CMA Community NRM Action Plan,
- Following the amazing effort of our volunteer community networks, the level of funded landcare facilitator support from the state government has increased from 4 FTE (8 positions) to 4.5 FTE (9 positions). The future support for our groups is looking bright.
- review of our 2019-2021 Reconciliation Action Plan, demonstrating how the CMA is supporting and integrating Indigenous connectivity into our broader NRM business.

Goulburn Broken CMA Employment Programs

Goulburn Broken CMA demonstrated its ability to be flexible and creative in adapting existing environmental initiatives to respond to different government employment work programs to achieve multiple outcomes.

The Authority had the privilege of being able to deliver two employment programs over the past 18 months.

The GMID Drought Employment Program, from December 2019 to January 2021, to support farmers, farm workers and local agribusiness workers impacted by drought; and

The Working for Victoria program, from November 2020 to June 2021, to provide employment and training opportunities to local people impacted by the coronavirus pandemic.

The programs were extremely successful in achieving employment opportunities for 71 local people throughout the two programs, enabling:

- participants to remain connected to the farm and the region
- participants to be happier and more confident towards the future and had meaningful work
- agencies to work together to support local people through the short-term transitions
- participants to develop new skills and knowledge
- some participants to move into different jobs and careers.

The programs were also able to deliver significant natural resource management works across the Goulburn Broken catchment and other parts of the Goulburn Murray Irrigation District. The participants contributed over 40,000 hours to natural resource management works, including:

- the collection of 113 kilograms of native seed and the propagation of around 16,000 native plants
- construction and maintenance of 17 kilometres of riparian fencing
- almost 3,000 hectares of woody weed control and
- the removal of over 200 cubic metres of rubbish that had been dumped within our regional, state and national parks.

The works have greatly benefited the environment and communities throughout the region.

Skills and training were a focus of the programs, with participants being provided the opportunity to receive formal training in First Aid, Construction Industry White Card, Agricultural Chemical Users Permit, Chainsaw use, Traffic Control, Asbestos Identification and Occupational Health and Safety.

Both programs were funded by the Victorian Government, with \$1.7 million provided for the GMID Drought Employment Program and \$1.45 million for the Working for Victoria program. This valuable investment was used mainly on employing local people, with the flow-on effect of wages being spent in local and regional businesses, which then supports the local economy and regional community.

The highlights from the programs compiled from responses of participants, labour hire suppliers and Goulburn Broken CMA staff were:

- Getting things done that would otherwise not have been done.
- Working outdoors and improving the environment.
- Seeing the personal development of the crew members, develop new skills, training & Qualifications, confidence, leadership skills and self-esteem.
- CMA Staff getting a buzz from teaching the crew members.
- The gender balance within the program.
- Work was done locally, and we had ownership of the achievements.
- One hundred per cent of crew members showed interest in improving the environment (genuine passion).
- Meaningful work, therefore, crew members wanted to get the work done.
- Greater appreciation of what the CMA does and acknowledgment that the environment needs support.
- Connecting CMA with the community.
- The friendship and support developed between crew members. Close knit teams.
- Crew members happy to be used for promotion of the program and complimentary on the work they were doing.
- Readiness for future employment.
- The programs willingness to deal with issues adaptively.
- A coordinated effort to share. The Partnership approach of the employment model between the Goulburn Broken CMA, Programmed Skilled Workforce & other agencies.
- What we were able to achieve in a COVID-19 world!

Investment area - Waterways

Compiled by: Mark Turner, Simon Casanelia, Daniel Lovell, Keith Ward, Tim Barlow, Meegan Judd, Dylan McWhinney, Jo Geddes, Christine Glassford, Corey Wilson, Pam Beattie, Sue Kosch, Kirsten Roszak, Collin Tate, Fiona Lloyd and Caroline Keenan.

Long-term and annual scorecard ⁱ

2020-21 performance Exceeded target

Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	MEDIUM

Water quality and fish populations have improved significantly from changes such as removal of stock-grazing and key fish-barriers, resnagging of streams, tree planting, waste water management and the delivery of water for the environment.

Dry periods and climate change continue to be a significant challenge.

Despite increasing waterbird habitat in the Goulburn Broken Catchment through environmental flows, populations of many species across the Murray-Darling Basin seem to be declining.

The risk from high unseasonal flows to streambank vegetation and critical habitat in the high-value lower Goulburn River and Barmah Forest continues to increase. Managing waterways for regional values becomes challenging because of competing priorities from other parts of the southern-connected Murray-Darling Basin.

Waterways are also subject to increasing pressure from recreation and other land uses.

Local and regional agency and broader community partnerships associated with waterway management are strengthening.

Increasing unauthorised activity across the catchment is affecting waterways. There have been more blue-green algae outbreaks in recent years.

Resilience assessment					Long-term strategic implementation ^v		
Critical attribute affecting long-term catchment health	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}			Start	Stage
	1990	2021	Trend 2018-21	Long-term (10+ years)			
				Current support ^{vi}	No support ^{vi}		
Stream flows and wetland inundation							
- Dammed (regulated) streams	●	●	▲	MEDIUM	VERY HIGH	2011	Early
- Undammed (unregulated) streams	●	●	▲	HIGH	VERY HIGH	1995	Middle
Streamside (Riparian) vegetation	●	●	▼	LOW	HIGH	1997	Late
Water quality	●	●	—	MEDIUM	HIGH	1996	Watch & adapt
Fish passage and habitat	●	●	▼	LOW	MEDIUM	1997	Late
Community capacity to be involved and act onground ^{vii}	●	●	—	HIGH	VERY HIGH	1997	Middle

Stream flows and wetland inundation

- Dammed (regulated) streams

- Undammed (unregulated) streams

Streamside (Riparian) vegetation

Water quality

Fish passage and habitat

Community capacity to be involved and act onground ^{vii}

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 Interim 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 2021.

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

Government investment, \$000

2018-19	2019-20	2020-21	2021-22 ⁱ
3,997	4,283	4,868	5,919

i. Forecast is based on the Corporate Plan 2021-22.

Strategic references

The Goulburn Broken Waterway Strategy 2014-2022 integrates direction and guidance from legislation, policies, strategies and plans at international, national, state, regional and local levels. Implementation of this strategy factors in prevailing circumstances, including current priorities identified through local planning (see page 21).

The interim review of this strategy was completed in November 2018. Murray-Darling Basin Authority and Victorian Government water plans and strategies are pertinent references for waterways management. Appendix 5 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, aquaculture, 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 the 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 include:

- 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 NRM, 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 1: 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 recreational pressure in many locations.

Clean water

Like much of Australia, Goulburn Broken waterways are well within thresholds for most parameters listed under the EPA's State Environment Protection Policy (Waters of Victoria), 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 in 2017, 2018 and 2019 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.

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.

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 has recovered 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. Since 2010, the cover and diversity of wetland plants has improved in response to delivery of water for the environment and natural flooding. The Barmah Strategic Action Plan and the Joint Management Plan for Barmah National Park are now being implemented and include the control of feral herbivores.

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. A trial to re-establish the threatened Southern Pygmy Perch (a six centimetre native fish) in Tahbilk Lagoon commenced. The project is implemented with ARI and Tahbilk Winery. The project aims to reduce the risk of Southern Pygmy Perch extinction by supplementing wild populations and re-establishing them where they have become extinct.

Birds: Delivery of water for the environment has increased opportunities for improving habitat and feeding and breeding for threatened and other waterbirds at several wetlands, including Gaynor and Reedy swamps. Knowledge is emerging of Barmah's importance as stronghold in Victoria for eastern great egret and intermediate egret.

Other: While there are some possible increases in native frogs and turtles, others are declining and becoming locally extinct, and crayfish seem to be impacted by hypoxic blackwater events. Fox impacts on turtles are declining because of improved understanding and management, but will need ongoing management. Frog populations at Moodie Swamp have improved, while populations at Reedy Swamp have been maintained.

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 the past four seasons 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 and traditional owners 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 heritage
- 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 down waterways and into 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 to provide technical, cultural and environmental knowledge, and prioritise use of water for the environment. Significant cultural heritage sites are being protected as they are recorded.

Since 2008-09, 6,285,628 megalitres of water has been delivered to wetlands and streams according to seasonal water plans (see table page 43 and bar chart on page 17). 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, Goulburn River, Broken Creek and Barmah Forest, providing a refuge to the return of wetter times. Several streams experienced record floods since the millennium drought ended. 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 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 Strathbogie Ranges and areas in the South West of the catchment.

Streamside (riparian) vegetation

Long-term objective: Between 2014 and 2022, increase area of streamsidelines (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 four years until 2016-17, 60 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 573 hectares of streamside in priority reaches had a modified grazing regime in the first four years of implementing the Waterway Strategy (159 per cent of the entire eight-year target of 359 hectares), and 321 hectares of non-priority reaches had stock opportunistically managed.

Since 1997, over 1,686 kilometres of fencing has been erected (protecting 12,109 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 chapter.

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

Waterway	Reach Length Both Sides (km)	Length Protected (km)	Percent Protected %
Acheron River	172.9	102.7	59
Boosey Creek	196.6	139.3	71
Broken Creek	467.2	381.4	82
Broken River	379.8	223.1	59
Delatite River	116.9	78.5	67
Goulburn River	1084.7	702.6	65
Holland Creek	154.6	93.8	61
Howqua River	133.0	122.6	92
Hughes Creek	169.3	112.0	66
Jamieson River	76.9	67.1	87
King Parrot Creek	125.8	91.7	73
Rubicon River	88.7	57.9	65
Ryans Creek	120.0	96.9	81
Seven Creek	274.3	164.1	60
Steavenson River	47.8	24.1	50
Sunday Creek	47.1	25.1	53
Yea River	160.6	33.9	21

Water quality

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

(CMAs are working with DELWP to consider regional water quality target setting in the next round of Regional Waterways Strategies. In the meantime, targets around phosphorus load reduction focus efforts.)

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 were 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 SEPP Environmental Quality Indicators and not thought to be of great current concern. 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 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).

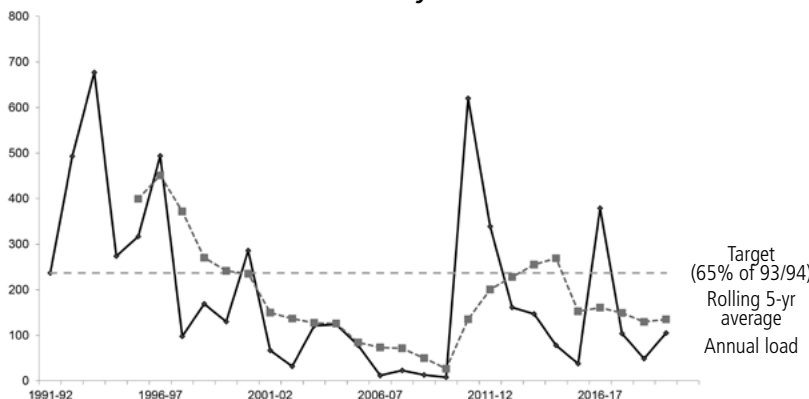
Current resnagging is restoring native fish habitat: native fish populations are responding strongly. However, resnagging on its own is unlikely to be the sole driver of native fish recovery. Better management of water for the environment and streamside zones by restricting stock access will result in 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: 3,017 large snags and rock have been placed in these waterways from 2011 until 2020-21.

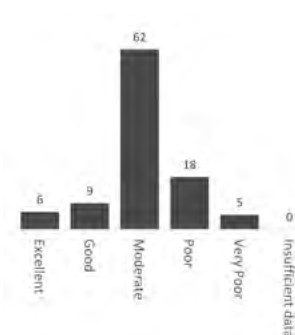
Managing risks from works and activities on waterways

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 the Goulburn Broken CMA.

Total phosphorus loads exported from Goulburn Broken Catchment, tonnes/year



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



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 page 38). 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 the 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 the 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, the Goulburn Broken CMA (and its predecessors) has actively promoted participation in agency-community partnerships to achieve better and more integrated management.

Long-term strategy implementation progress and 2020-21 performance

This section assesses progress in implementing Goulburn Broken Waterway Strategy 2014-2022 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	2020-21 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 2013 and 2018) 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>COVID-19 somewhat restricted funding processes and the ability to deliver works.</p>

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.

Landholder grants uptake and ongoing participation

Landholders who implemented streamside works between 1993 and 2016 with the Goulburn Broken CMA are generally very satisfied with outcomes achieved and the support provided:

- those who believe 'their' stream frontage is in good or excellent condition increased from 19 to 69 per cent
- 97 per cent would recommend undertaking works to another landholder, and
- the average score on a scale of 1 to 7, where 1 is poor and 7 is excellent, for effectiveness of works was 6; advice/technical support, funding, works coordinated by the CMA, and communication throughout the project was 5.9; follow-up contact post-project 5.

Most landholders are voluntarily maintaining sites following initial works through the initial grant funding, such as weed control (85 per cent) and fence repair (65 per cent).

Long-term strategy implementation progress	2020-21 performance
Streamflows and wetland inundation	
Undammed (unregulated) streams	
<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>Goulburn Broken CMA is investigating innovative approaches to secure flows through the Integrated Water Management Forum.</p>	<p>The activities below (streamside vegetation) contribute to the protection and enhancement of undammed streams.</p> <p>The condition and extent of aquatic habitat was monitored along 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 more favourable conditions than last summer (cooler and wetter), no management interventions were considered necessary.</p> <p>Goulburn Broken CMA continued to participate as a member of the Goulburn Broken Integrated Water Management Forum. This included participation in the practitioner's group and priority projects.</p>
Dammed (regulated) streams	
<p>Since the early 2000s, with the assistance of partner organisations and input from the regional community, the 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 43 shows the annual volume of environmental water delivered within the Goulburn Broken CMA in the past 11 years.</p> <p>In recent years, the 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 and water bugs, and reduced the growth of nuisance aquatic plants.</p> <p>The Victorian Government, with support from the Goulburn Broken CMA and its partners, has or is increasing water for the environment availability by saving water in supply and delivery for farming through projects such as the Farm Water Program and the GMW Connections Project.</p>	<p>628,691 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, Kanyapella Basin, Gaynor Swamp and, Horseshoe Lagoon (in partnership with Taungurung Land and Water Council) (see tables on page 43 and 44).</p> <p>Significant ecological outcomes included:</p> <ul style="list-style-type: none"> • Unregulated flows over winter and a spring fresh deposited seed-rich sediment on the banks of the lower Goulburn River. This process is important in promoting the growth and establishment of bank stabilising vegetation. Bank vegetation also provides habitat for native fish and macroinvertebrates. A late spring fresh successfully stimulated Golden perch spawning. • Reasonable numbers of Murray cod and high number of golden perch were recorded in the Broken River. However, there was no evidence of Murray cod and golden perch recruitment in the Broken River. Low flows last year may have impacted their body condition and recruitment potential. • Low number of River blackfish and Murray-Darling rainbow fish were captured in the upper Broken Creek. The low number of native fish captured could be a reflection of the low flows last year. • The growth and reproduction of wetland and floodplain plants including Moira grass in Barmah Forest. Golden perch, silver perch and Murray Cod spawned between in December in the Murray River channel. Little Pied Cormorants, Little Black Cormorants, Straw-necked Ibis, Australian White Ibis and Royal Spoonbills successfully bred in Barmah Forest. • Gaynor Swamp received 1000 megalitres of environmental water in spring providing habitat for thousands of waterbirds including a number of threatened species. Lewins Rail was also recorded at the site for the first time.

Long-term strategy implementation progress	2020-21 performance
Streamflows and wetland inundation (continued)	
<p>Dammed (regulated) streams (continued)</p>	<p>Significant ecological outcomes included (continued):</p> <ul style="list-style-type: none"> Freshes were delivered down the lower Broken Creek in September, October and November. These provided a flow cue to encourage native fish movement and spawning. <p>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.</p> <p>219,174 megalitres of the environmental water delivered down the Goulburn River and lower Broken Creek continued to the Murray River to benefit downstream water quality, recreation, wetlands and rivers.</p> <p>283,183 megalitres of water in transit to the Murray River provided some environmental benefits in the lower Goulburn River and the lower Broken Creek.</p> <p>The Victorian Minister for Water in August 2020 announced an interim operating regime to protect the health of the lower Goulburn River. The regime restricted the delivery of water from the Goulburn inter-valley trade account to the Murray system to 40 gigalitres a month (unless it caused a significant delivery shortfall) between December and April. This reduced the impact of the water deliveries on lower Goulburn Rivers environmental values.</p>
Streamside (riparian) vegetation	
<p>Streamside vegetation implementation programs are at a late stage of maturity after two decades of onground works and significant land tenure changes towards more passive uses.</p> <p>Since 1997, over 1,686 kilometres of fences have been erected and approximately 12,109 hectares of riparian land have been protected and/or enhanced.</p> <p>A total of 573 hectares of streamside in priority reaches were fenced in the first four years of implementing the Waterway Strategy (159 per cent of the entire eight-year target of 359 hectares), and 321 hectares of non-priority reaches were opportunistically fenced.</p> <p>The significant over-achievement against target for area is likely to be attributed to bigger than expected acceptance by landholders to fence further back from streambanks, including efficient fencing in straight lines from meander to meander rather than following them around.</p>	<p>Works in this area were on one hand restricted by COVID-19 but on the other enabled by Working for Victoria crew funded by the Victorian Governments COVID-19 economic support response.</p> <p>Over 100 hectares of riparian vegetation enhancement work took place.</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>There has been a change in focus to invest for the public benefits of streamside vegetation works first, rather than instream soil erosion works. In the absence of significant floods, recent trends are expected to continue.</p>	<p>The Water Quality Forum continued monitoring the water quality conditions.</p> <p>As reported in 'undammed streams' above this year provided more favourable condition for waterways although unusually high outbreaks of Blue Green algae were observed, mostly within storages.</p> <p>Lake Benalla was drawn down in mid-February to expose and dry the Cabomba infestation. This is the only practical method to control the growth and spread of this weed of national significance. This was undertaken in partnership with GMW and the Benalla Rural City Council. The Benalla Rural City Council also mechanically removed some of the Cabomba while it was exposed to assist its control.</p>

Long-term strategy implementation progress	2020-21 performance
<p>Fish passage and habitat</p> <p>Goulburn Broken CMA has focused on resnagging waterways to improve instream habitat. Approximately 3,017 instream habitat structures, including large wood and rock, have been added to priority waterways since 2011 (until the end of 2020-21), including the Goulburn River, Broken Creek, Hughes Creek, Seven Creeks, Holland Creek, Howqua River and Tahbilk Lagoon.</p>	<p>An additional 20 snags were installed in the Seven Creeks in 2020-21. There is an increasing appetite to repurpose timber removed from development projects and realise an environmental benefit. There is also increasing support, including financial, from recreational fishing groups to undertake habitat improvement works.</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 COVID-19 restrictions.

Landholder grants uptake and ongoing participation

Landholders who implemented streamside works between 1993 and 2016 through the Goulburn Broken CMA are generally very satisfied with the support provided and outcomes, with most voluntarily maintaining sites (Glassford 2017).

Traditional Owners

Traditional Owner participation in 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 pages 30 and 31.)

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.

A survey of 38 (18 community and 20 partner agency) current and former members of the groups, as part of a 2017 review, indicated general satisfaction with group input into developing annual water plans (also known as seasonal watering proposals).

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 NRM 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 DELWP (waterways) partnership

Goulburn Broken CMA waterway staff view their partnership with DELWP's waterway staff very favourably. They cite the value of clear understanding by CMA and DELWP 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 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 are mostly being implemented on schedule.

Community capacity to be involved and act onground in 2020-21

The Broken and Goulburn Environmental Water Advisory Groups and the Goulburn Broken Wetland Management Group continued to meet, including via video meetings, and guide water for the environment planning, use, monitoring and complementary works. The groups are comprised of agency, stakeholder and community representatives.

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 operational advisory group (which guides environmental water management in the Barmah and Millewa Forests).

The eleventh Floodplain Ecology Course was successfully held at Barmah during May, managed by the Goulburn Murray Landcare Network and Goulburn Broken CMA, with 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. A total of 1591 community members and school students were involved in RiverConnect awareness-raising and education programs.

Engagement effort were hampered this year due to COVID-19 restrictions and operating arrangements.

Monitoring, research and development, and adapting management in 2020-21

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
- Lake Benalla was assessed for the presence of Cabomba, an aquatic 'Weed of National Significance', this year including an active draw down for management.

The Living Murray program continued to fund a range of activities to improve the health of Barmah-Millewa Forest including monitoring the ecological response of birds, fish and vegetation to delivery of water for the environment. In addition, a state-funded projects investigated and implemented onground works to protect Moira grass and assessed the presence of key threatened plant species and Superb Parrot foraging and breeding activity.

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, water quality, water depth, waterbirds and frogs were monitored at the following sites that receive water for the environment or were naturally inundated: Reedy Swamp, Moodie Swamp, Black Swamp, Doctors Swamp, Horseshoe Lagoon, Kinnairds Wetland, Kanyapella Basin and Loch Garry. The monitoring was funded by DELWP and complementary monitoring was undertaken at a number of these wetlands as part of a statewide wetland monitoring program (Wetland Monitoring and Assessment Program - WetMAP).

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 undertaking of fish movement within the region and beyond.

Environmental water use

Wetland or stream	Volume, ML ⁱ										
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Barmah-Millewa Forest (Vic)	184,500	184,500	2,959	195,386	0	109,351	95,800	190,091	75,182	168,500	212,680
Barmah-Millewa Forest (NSW)	243,500	243,500	0	167,700	0	328,044	158,388	223,919	97,607	192,500	164,923
Black Swamp	0	0	0	50	0	80	0	0	80	65	0
Lower Broken Creek	ⁱⁱ	10,366	41,230	38,593	34,306	30,319	36,192	41,408	27,633	35,777	33,694
Upper Broken Creek	0	0	51	0	387	0	0	0	0	597 ⁱⁱⁱ	1,235 ⁱⁱⁱ
Broken River	24.2	0	0	0	0	0	0	1000	250	258 ⁱⁱⁱ	23 ⁱⁱⁱ
Doctors Swamp	0	0	0	0	0	594	0	0	0	67	0
Goulburn River	26,670	195,110	255,427	312,349	304,125	228,252	193,272	354,832	247,268	373,256	214,625
Kinnairds Wetland	0	0	0	179	0	696	0	0	386	259	0
Moodie Swamp	0	0	0	121	500	500	0	500	0	0	0
Reedy Swamp	0	0	0	0	0	475	0	0	500	500	0
Gaynor Swamp	0	0	0	0	0	0	0	500	600	0	994
Loch Garry	0	0	0	0	0	0	0	0	0	500	0
Horseshoe Lagoon	0	0	0	0	0	0	0	0	0	121	17
Kanyapella Basin	0	0	0	0	0	0	0	0	0	0	500
TOTALS	454,694	633,476	299,667	714,378	339,318	698,311	483,652	812,250	449,506	772,400	628,691

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

ii. Environmental water only became available for use in the lower Broken and Nine Mile creeks in 2010-2011. Prior to this flow was managed by regulated and unregulated flows; redirecting Goulburn River and Murray River flows through the lower Broken and Nine Mile creeks; and deployment of the Goulburn River Water Quality Reserve.

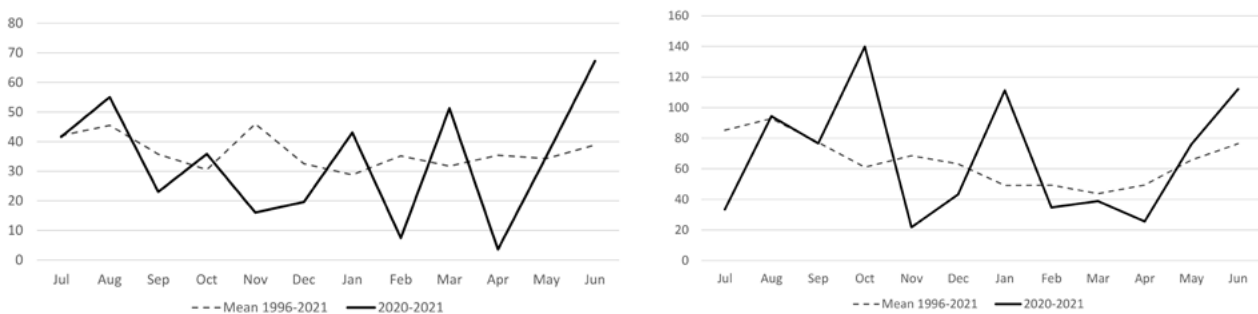
iii. In accordance with the Broken System Bulk Entitlement, the Goulburn Broken CMA and Goulburn-Murray Water agreed to reduce the passing flow requirement below Lake Nillahcootie from 30 megalitres/day or natural to 15 megalitres/day or natural and banked inflows above 15 megalitres/day. This water was used to maintain minimum baseflow requirements in the Broken River and Upper Broken Creek.

Environmental water used during 2020-21

System	Quantity, ML	Source
Water used WITHIN the Goulburn Broken Catchment		
Goulburn River	150,277	Commonwealth Environmental Water – Goulburn River System
	39,413	The Living Murray Water – Goulburn River System
	24,935	Victorian Environmental Water – Goulburn River System
Lower Broken Creek	18,727	Commonwealth Environmental Water – Goulburn River System
	1,725	Victorian Environmental Water – Goulburn River System
	0	Goulburn River Water Quality Allowance – Goulburn River System
	13,242	Commonwealth Environmental Water – Murray River System
	0	Victorian Environmental Water – Murray River System
Barmah-Millewa Forest	283,495	Commonwealth Environmental Water – Victoria and NSW
	53,329	The Living Murray allocation – Victoria and NSW
		Barmah-Millewa Forest Environmental Water Allocation
	26,365	Victorian Environmental Water – Murray River System
	9,221	Murray River Increased Flows (RMIF) – Victoria and NSW
Upper Broken Creek	5,193.00	NSW Adaptive Environmental Allowance
	397	Victorian Environmental Water – Broken River System
Broken River	838	Commonwealth Environmental Water – Broken River System
	23	Banked passing flows ⁱⁱ
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)	17	Victorian Environmental Water – Goulburn River System
Kanyapella Basin (Lower Goulburn River)	500	Victorian Environmental Water – Goulburn River System
Moodie Swamp (Upper Broken Creek)	0	Victorian Environmental Water – Broken River System
Gaynor Swamp (Corop)	994	Victorian Environmental Water – Goulburn River System
Water used DOWNSTREAM that benefited waterways in the Goulburn Broken Catchment		
Murray River	215,869	Inter-Valley Transfers (Goulburn River) ⁱ
	43,118	The Living Murray allocation (Goulburn River)
	35,155	Inter-Valley Transfers (lower Broken Creek) ⁱ
	522,925	Goulburn River Unregulated Flows and Operational Releases
	32,158	Murray consumptive water in transit and unregulated flows(lower Broken Creek)

- 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.
- ii. In accordance with the Broken System Bulk Entitlement, the Goulburn Broken CMA and Goulburn-Murray Water agreed to reduce the passing flow requirement below Lake Nillahcootie from 30 megalitres/day or natural to 15 megalitres/day or natural and banked inflows above 15 megalitres/day. This water was used to maintain minimum baseflow requirements in the Broken River and Upper Broken Creek.

Monthly rainfall 2020-21 at Shepparton airport (left) and Lake Eildon (right), mm ⁱ



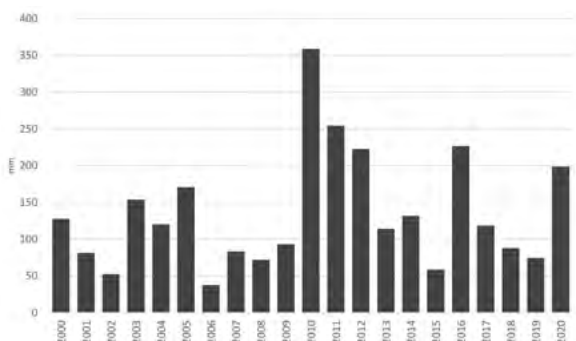
i. Source: Australian Government Bureau of Meteorology.

Waterways onground Actions 2018-19, 2019-20 and 2020-21

Action	From funds received through Corporate Plan					
	Achieved ⁱ			Target	% achieved	
	2018-19	2019-20	2020-21			
Stock grazing action						
Fence riparian land (= wetland + stream/river remnant below)	ha	169	120	153	-	
Fence wetland remnant	ha	2	8	0		
Fence stream/river remnant ⁱⁱ	ha	166	112	153	-	
Fence stream/river remnant	km	48	33	36	-	
Off-stream watering	no.	17	22	32	-	
Nutrient-rich and turbid water and suspended solids action						
Stormwater management projects ⁱⁱⁱ	no.	-	-	-	-	
Instream and near-stream erosion action						
Bank protection actions	km	0.30	-	-	-	
Instream & tributary erosion controlled	km	-	-	-	-	
Changed flow-pattern action						
Environmental water use ^{iv}	ML	449,506	772,400	628,691	-	
Weed invasion action						
Weeds – aquatic weeds controlled (managed)	km	9	28	8	-	
Habitat loss management						
Rock ramp fishway	no.	-	-	-	-	
Fish barrier removal	no.	-	-	-	-	
Instream habitat ^v	no.	581	259	20	-	
Surface water action ^{vi}						
Drain - primary built ^{vii}	km	32	17	55	-	
Drain - community built	km	4.6	-	-	-	
Farm reuse systems installed ^{viii}	no.	36	-	-	-	
High flow drain diversion - high nutrient water removed ^{ix}	ML	-	-	-	-	
Irrigation systems - improved ^x	ha	2,538	7,790	4,947	-	

- 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).

Annual river inflow Goulburn Broken Catchment, mm



- i. Lower Goulburn River. Source: Australian National University, Fenner School of Environment & Society.

What's next?

Implementation of the Goulburn Broken Waterway Strategy 2014-2022, in partnership with regional agencies and the community, will continue. The strategy will be reviewed by early 2022 after which the renewal process will start. Actions from the 2018 interim review will drive the remaining years of the strategy towards its renewal in 2022. Strategic priorities that emerged from the review are around:

1. Strengthen relations with Traditional Owners to increase their participation at all stages of waterway management for environmental, cultural, economic, and community benefits.
2. Make it easier for community members to contribute to Goulburn Broken Waterway Strategy development by framing high-level goals in a way that makes them meaningful when identifying actions.
3. Maximise shared benefits from water entitlements, especially for the environment.
4. Refine streamside vegetation programs as the need for new fencing nears its endpoint on major streams.

Operational priorities for the final three years of the Strategy's implementation are:

1. Develop a frequently updated action plan from the recommendations listed in the interim review and complementary reviews, and from other action checklists.
2. Continue to implement stream-frontage works with adjacent landholders, with an emphasis on increased targeting (of waterway values).
3. Continue to protect and improve the ecological character of Barmah Forest Ramsar site.
4. Consider constructing an implementation program that delineates activities into two types: maintenance and improvement, which relates mainly to vegetation.
5. Continue to improve efficiency and effectiveness of delivering water for the environment by applying tight adaptive management and leveraging off opportunities provided by the Basin plan.
6. Complete the new FLOWS study and ecological models for the lower Goulburn River to inform environmental water planning, delivery and monitoring. (This emerged as a priority after the interim review).

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 2021-22 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 minimum 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
- promoting the growth and establishment of Moira grass and supporting colonial waterbird breeding in Barmah Forest
- promoting the health of native vegetation communities and supporting waterbird and frog breeding at Horseshoe Lagoon, Moodie Swamp, Reedy Swamp, Gaynor Swamp, Loch Garry, Kanyapella Basin, Kinnairds Wetland, Black Swamp and Doctors 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 will continue to be investigated and implemented further with DELWP and partners through the Goulburn to Murray Trade rule review and the associated Goulburn River operating rules.

Activities for the years 2022-23 to 2024-25 will be identified and submitted through DELWP as part of bidding for funding from the Environmental Contributions Levy tranche 5.

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

Investment area – Floodplain management

Compiled by Guy Tierney and Joel Leister.

Long-term and annual scorecard ⁱ

2020-21 performance	On target		
Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	MEDIUM

There have been significant floodplain management improvements in many geographic areas and others have been scheduled.

As more infrastructure and assets are placed within floodplains, flood impacts potentially increase, but through floodplain management tools, annual average damages and social trauma have significantly decreased.

Climate change considerations are built into the Flood Studies.

Resilience assessment					Long-term strategic implementation ^v		
Critical attribute affecting long-term catchment health ⁱⁱⁱ	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}			Start	Stage
	1990	2021	Trend 2018-21	Long-term (10+ years)			
				Current support ^{vi}	No support ^{vi}		
Flood impact	●	●	▼	MEDIUM	VERY HIGH	2002	Late

Certainty of rating is High. Flood intelligence information translates into Municipal Flood Emergency Plans and Planning Schemes and Local Flood Guides. Total Flood Warning Systems provide access to flood warning and awareness information. Mitigation implementation programs and detailed design phase. Application of sound floodplain management principles to new land-use and development applications.

- 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 Floodplain; benchmark for contribution is the desired level, as defined (formally or informally) in 2021.
- 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

2018-19	2019-20	2020-21	2021-22 ⁱ
940	836	1,025	818

- i. Forecast is based on the Corporate Plan 2021-22.

Strategic references

- Victorian Floodplain Management Strategy (2016)
- Goulburn Broken Regional Floodplain Management Strategy 2018-2028
- *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 Floodplain Management Strategy 1998).

Floodplain management functions are delegated to the Goulburn Broken CMA (*Water Act 1989* Section 202) and

include advising local councils, DELWP'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.

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 impacts from floods on urban and rural communities. These techniques also help understanding of environmental flow regimes of waterway and wetland systems.

Understanding the nature of flooding (flood extent, elevation, depth, velocity and hazard) and flood risk (likelihood and consequences) is paramount in any flood study that investigates 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's 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 (RFMS; 2018-2028) 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 resilience 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 dissemination, communication, education and awareness of flood and related information.
- **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 Total Flood Warning System program).

Implementation program	Long-term progress
Flood mitigation works	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 results 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). Implementation is opportunistic through Australian and Victorian Government incentives, such as the Risk and Resilience Grants Program. No incentives were available in this financial year, however, grants are likely to be available in 2021-22.
Total flood warning systems	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). 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 launched for the following at-risk communities in the Acheron Valley (Buxton, Marysville and Taggerty), Benalla, Euroa, Merrigum, Murchison, Nagambie, Numurkah, Shepparton and Mooroopna, Tatura and Violet Town. The Portal is currently being expanded to include Seymour, with ongoing discussions taking place around the inclusion of additional communities.
Land-use planning	A total of 56 studies have been completed since 1997 and six are underway (Goulburn Broken Rivers, Sunday Creek Catchment, Kyabram, Jamieson, Boosey and Upper Broken Creeks and Dabyminga Creek). All local government authorities have flood zone and overlay controls within the Goulburn Broken Catchment with most having incorporated decision criterion. As new studies are finalised opportunities to incorporate flood mapping into planning schemes will be implemented.
Municipal flood emergency plans	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.

Improving the natural flooding patterns of ecosystems via sensitive floodplain protection planning is a task in progress.

2020-21 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 2020-21. 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 a town levee system 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.

Flood studies and implementation plans for 2020-21

Project name	Lead agency	Status
Flood Mitigation Work Program: Priority actions 22 (9 high, 8 medium, 5 low). Status: 2 completed, 4 ongoing		
Cobram East Flood Mitigation Functional Design	Moira Shire Council	High priority. Several mitigation options have been developed and presented. The community reference group that are guiding this project have adopted a preferred alignment. A Risk and Resilience Grants Program funding bid has been lodged for Stage 1.
Numurkah Functional Design for Flood Mitigation Works	Moira Shire Council	High priority. Community reference group has been established. Detailed design completed for Stage 1.
Seymour Town Levee Implementation Plan	Mitchell Shire Council	High priority. In June 2020, the Mitchell Shire Council resolved to cease the Seymour Town Levee Project.
Euroa Supplementary Mitigation Works	Strathbogie Shire Council	House protection complete south of Castle Creek.
Total Flood Warning Systems: Priority actions 42 (12 high, 17 medium, 5 low). Status: 4 completed, 13 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 floods.
Granite Creeks Regional Flood Mapping Project (Hume Freeway to the Goulburn River)	DELWP	Low priority. Study has been completed. Local Flood Guides to be prepared. Ongoing.
Shepparton East Overland Flood Study	Goulburn Broken CMA	High priority. Study completed. Local Flood Guide to be prepared. Ongoing.
Flood warning improvements for Benalla	Benalla Rural City Council	High priority. Currently part of the regional community my.floodreport portal.
Yea River Flood Intelligence Project Study	Goulburn Broken CMA	Medium priority. Revised Flood Class Levels defined – currently under review
Whiteheads Creek Floodplain Management Study	Mitchell Shire Council	High priority. Study Complete.
Flood Study of the Goulburn and Broken Rivers	Goulburn Broken CMA	High priority. Hydraulic Calibration report delivered in May 2021 by consultant. Ongoing.
Sunday Creek Catchment Flood Intelligence and Mapping Study	Mitchell Shire Council	Medium priority. Study commissioned in October 2018. Ongoing.
Boosey and Upper Broken Creeks Flood Study	Moira Shire Council	High-Medium priority. Project commenced in 2019. Ongoing.
Kyabram Flood Study	Campaspe Shire Council	High Priority. Study commissioned in 2019. Expected completion in 2021. Ongoing.
Jamieson Flood Study	Goulburn Broken CMA	Low Priority. Study commenced in 2019. Ongoing.
Howqua River Flood Study	Goulburn Broken CMA	Low Priority. Study commenced in 2020. Ongoing.
Dabyminga Creek Flood Study	Goulburn Broken CMA	Low Priority. Study commenced in 2021. Ongoing.
Euroa Flood Intelligence and Mapping Study	Strathbogie Shire Council	High priority. Study completed. Local flood guide to be developed. Ongoing.
Land-use Planning: Priority actions 68 (28 high, 18 medium, 21 low, 1 very low). Status: 6 completed, 12 ongoing		
Nagambie Flood Study	Strathbogie Shire Council	High priority (completed). Flood zone and overlays completed. The Council will amend its Planning Scheme together with Euroa and Violet Town.
Euroa Flood Intelligence and Flood Mapping Study	Strathbogie Shire Council	High priority (completed). Flood zone and overlays completed. The Council will amend its Planning Scheme together with Nagambie and Violet Town.
Violet Town Floodplain Management Study	Strathbogie Shire Council	High priority (completed). Flood zone and overlays completed. The Council will amend its Planning Scheme together with Euroa and Nagambie.
Kilmore Flood Mapping and Intelligence Study	Mitchell Shire Council	High priority (completed). Flood zone and overlays completed. Council to prepare a Planning Scheme Amendment.
Kyabram Flood Overlays	Campaspe Shire Council	High priority Flood study is nearing completion. Ongoing
Flowerdale Flood Zone and Overlays	Murrindindi Shire Council	High priority (completed). Flood overlays completed in late 2017. Murrindindi to consider this as part of an LGA-wide planning scheme amendment including Buxton, Taggerty, Marysville.

Project name	Lead agency	Status
Rural flood mapping (Eildon & Nillahcootie catchments)	Goulburn Broken CMA	Low priority. Final report and hydrologic deliverables completed 2015-16. No flood mapping deliverable to date. Ongoing.
Hydrology of the Acheron catchment (Marysville, Buxton and Taggerty)	Goulburn Broken CMA	Medium-High priority. Hydrology and hydraulic modelling completed. Flood overlays to be completed for Planning Scheme Amendment. Ongoing.
Shepparton East Overland Flood Study	Goulburn Broken CMA	High priority. Study Completed early 2018. A review is underway to align with new technical standards. Ongoing.
Shepparton Mooroopna Flood Mapping and Intelligence Study	Greater Shepparton City Council	High priority. Final report adopted by Council in 2019. Flood zone and overlay controls to be based to new LiDAR and refined work in 2021. Ongoing.
Whiteheads Creek Floodplain Management Plan	Mitchell Shire Council	High priority. Study in progress. Flood overlays to be prepared once study is complete. 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)	DELWP	Low priority. Study has been completed. Flood Overlays to be prepared. 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.
Kyabram Flood Study	Campaspe Shire Council	High Priority. Study in progress. Flood overlays to be prepared once study is complete. Ongoing.
Municipal Flood Emergency Plans: Priority actions 69 (20 high, 25 medium, 23 low, 1 very low). Status: 9 completed, 9 ongoing		
Granite Creeks Regional Flood Mapping Project (Hume Freeway to the Goulburn River)	DELWP	Medium priority. MFEP update required following completion of study. Ongoing.
Yea River Flood Intelligence Project Study	Goulburn Broken CMA	High priority. MFEP requires a revision based on new gauge. Ongoing.
Whiteheads Creek Floodplain Management Study	Mitchell Shire Council	High priority. See TFWS for commentary. MFEP required an update following completion of the report. Ongoing.
Flood Study of the Goulburn and Broken Rivers	Goulburn Broken CMA	Low priority. This is across five LGAs where each MFEP will require revisions. Ongoing.
Sunday Creek Catchment Flood Intelligence and Mapping Study	Mitchell Shire Council	High priority MFEP update required following completion of study. Ongoing.
Upper Broken and Boosey Creeks Flood Study	Moira Shire Council	Medium priority. MFEP update required following completion of study. Ongoing.
Kyabram Flood Study	Campaspe Shire Council	Medium priority. MFEP update required following completion of study. Ongoing.
Nagambie Flood Study	Strathbogie Shire Council	High Priority. Flood study has been completed. Flood intelligence to be included in Strathbogie MFEP. Ongoing.
Violet Town Flood Study	Strathbogie Shire Council	High Priority. Flood study has been completed. Flood intelligence to be included in Strathbogie MFEP. Ongoing.
Whole of region: Priority actions 10 (6 High, 4 Medium). Status: 1 completed, 1 ongoing		
Community flood information portal (HydroNET)	Goulburn Broken CMA	High priority. First stage complete (launched in September 2020). Goulburn Broken CMA in discussions to expand to other communities across the catchment. Mitchell Shire has joined the partnership in May 2021.
Undertake exercising MFEPs	VICSES	High priority. Annually.

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 on page 51. Statutory targets under the *Water Act* are shown on page 95. In 2020-21, 99.2 per cent of responses were within the prescribed period with an average response time of 14.0 days.

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

Works on waterways permits

There have been 97 permits issued for works and activities on waterways within an average response time of 15.0 days.

Works and operations

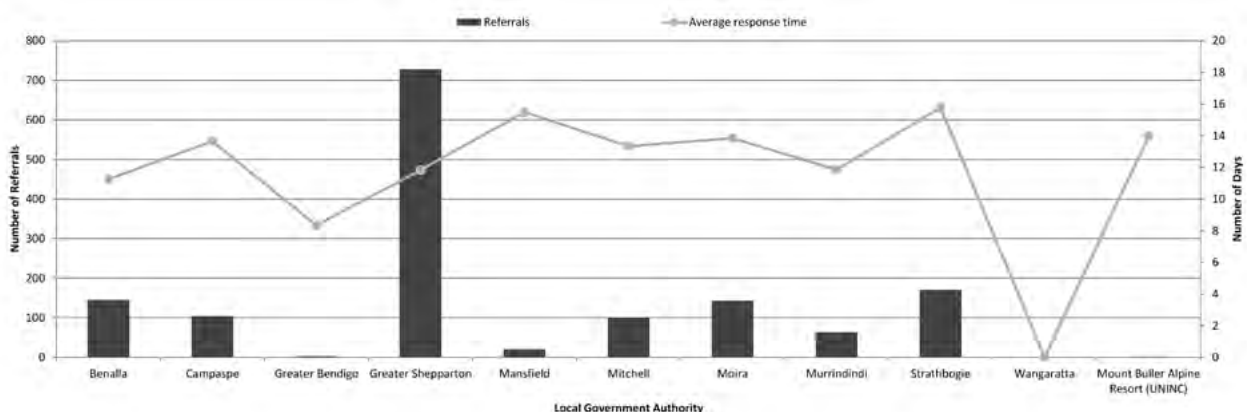
Floodplain management actions 2020-21

Action	From funds received		
	Achieved ⁱ	% of responses	
Integrating knowledge into planning			
Land Use Development Direct Applications (LUD)	no.	394	26.7
Planning Scheme Amendment Direct Application (PSA)	no.	4	0.3
Flood Information Request Direct Applications (FIR)	no.	53	3.6
Other Direct Applications (DAOTH)	no.	4	0.3
Land Use and Development [Formal] (S 55)	no.	501	33.9
Land Use and Development [Advice only] (S 52)	no.	80	5.4
Certification of Subdivision (S 8)	no.	120	8.1
Subdivision and Certification (S 55 & S 8)	no.	4	0.3
Notice of Planning Scheme Amendment (S 19)	no.	4	0.3
Victorian Building Regulations [VBRs] (R 153)	no.	276	18.7
Other LGA Applications (LGAOTH)	no.	32	2.2
Query & Notification of Unauthorised Work	no.	0	0
Statement of Compliance (S 8)	no.	0	0
Work Plan [Minerals and Energy] (S 77)	no.	1	0.1
Unknown	no.	1	0.1
Other DELWP Application	no.	1	0.1
Total		1475	
Victorian Civil Administration Tribunal and Planning Panels Victoria hearings	days	0	
Floodplain implementation			
Gazettal of Flood Amendment	no.	0	
Urban flood studies and management plans	no.	0	
Regional flood studies and management plans	no.	0	
Creating awareness			
Flood education and awareness program	no.	1	

i. Most actions are performed reactively so no targets are set annually, however there are KPIs relating to regulatory waterway/water functions (see page 95).

What's next?

- Expand the community flood report tool for those most at-risk communities.
- Local government planning scheme amendments to incorporate new mapping and performance-based assessment criteria will continue.
- Preparation of a four-year work plan and a monitoring, evaluation, reporting and improvement plan to assist with the implementation of the Regional Floodplain Management Strategy.
- Implementation of the Victorian and Regional Floodplain Management Strategies.



Investment area - Biodiversity

Compiled by Jenny Wilson, Steve Wilson, Janice Mentiplay-Smith, Jim Begley, Gaye Sutherland and Tony Kubeil.

Long-term and annual scorecard ⁱ

2020-21 performance Exceeded target

Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	VERY HIGH

Native vegetation improvements actions, such as revegetation and stock control, have improved 1.4 per cent (22,470 ha) of the Catchment's private land in the past 10 years. After accounting for losses also during this time, native vegetation extent has increased by the order of 0.3 per cent (4,500 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. The removal of logging on private land such as the Strathbogie Ranges contributes to native vegetation improvement.

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

Public land management is occurring across a greater area of reserves with an increased focus and funding for pest plant and animal control.

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

Change to legislation and investment models are creating uncertainty at a regional scale.

Resilience assessment	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}		Long-term strategic implementation ^v		
	1990	2021	Trend 2018-21	Long-term (10+ years)		Start	Stage
				Current support ^{vi}	No support ^{vi}		
Critical attribute affecting long-term catchment health							
Native vegetation extent	●	●	▲	VERY HIGH	VERY HIGH	1997	Escalated response ^{vii}
Native vegetation quality	●	●	▲	VERY HIGH	VERY HIGH	2003	Escalated response ^{vii}

Certainty of rating is Medium. Certainty that biodiversity information about 'very high' risk is very high. Certainty around native vegetation extent is medium (includes many assumptions). Certainty around native vegetation quality is very low (quantitative method in first year of study).

- 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 Biodiversity; benchmark for contribution is the desired level, as defined (formally or informally) in 2021.
- 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

2018-19	2019-20	2020-21	2021-22 ⁱ
2,612	2,689	2,876	2,402

i. Forecast is based on the Corporate Plan 2021-22.

Strategic references

Investment in the Catchment's biodiversity is guided by the Biodiversity Strategy for the Goulburn Broken Catchment 2016-2021 and other regional, state and national policies and strategies (see Appendix 5).

Background

Biodiversity is all the living flora, fauna and fungi, 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, 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, the Goulburn Broken CMA has separated biodiversity from other biophysical features, such as land and waterways.

Since its inception in 1997, the 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 and the associated biodiversity theme paper.

Catchment condition – Biodiversity (since 1990)

Many ecosystems, plant and animal communities, and species are threatened with extinction, which is reflected in their National and State Conservation Status. Goulburn Broken CMA aims to achieve more 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. The vision of the Biodiversity Strategy is:

Highly valued, resilient and adaptive ecosystems supporting healthy native biodiversity

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..

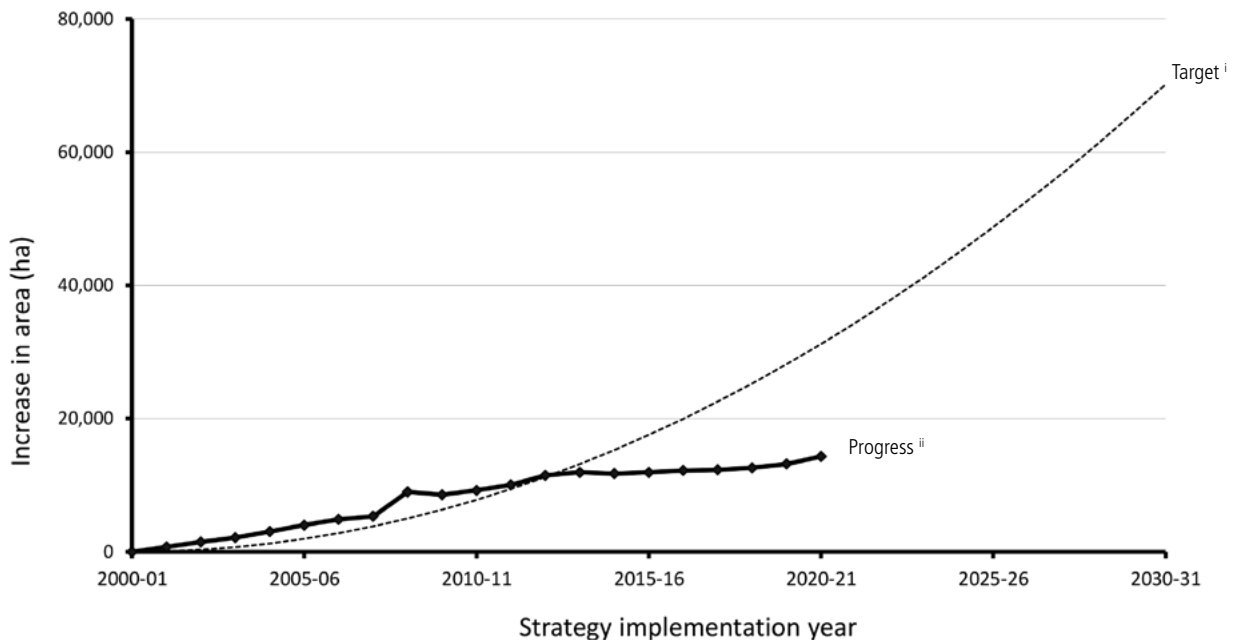
The change in extent of native vegetation is relatively easy to measure (with assumptions). This is an important indicator of progressing towards the vision, and it is identified as a critical attribute for system function by various scientists (at least 10 per cent extent minimum, preferably > 30 per cent). Progression in the long-term objectives for 'Habitat quality' and 'species' population viability' is much 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. Our understanding of whether we are creating resilient landscapes and viable populations of species is limited.

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

Climate change effects, such as the increased frequency and intensity of fire, sporadic and intense rainfall events, 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' by landholders; 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.

Progress towards native vegetation extent targetⁱ, 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 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 legal and 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. Detailed explanation of these assumptions can be found in the Goulburn Broken CMA's Biodiversity Monitoring Action Plan upon request.

Long-term strategy implementation progress and 2020-21 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. Goulburn Broken CMA attracts funds from diverse sources 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 34).

Long-term strategy implementation progress	2020-21 performance
Biodiversity Program	
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. The Biodiversity team continues to adapt to changes in a variety of ways by: responding to and influencing strategies of all CMA programs and other NRM agencies; adapting a resilience approach to strategic planning and project delivery; improving understanding of and responding to, relationships between social and economic factors in biodiversity conservation.</p>	<p>The Goulburn Broken Biodiversity Strategy 2016-2021 is being implemented. An updated strategy in late 2021 will adopt a resilience theme, with a focus on responding to climate change. Projects deliver on both the 'Australia's Strategy for Nature 2019-2030' and DELWP's State Biodiversity Plan 2037.</p> <p>The team adapted to major changes from February 2020 to COVID-19 threat, but continued to deliver on all projects, meetings were held remotely, and partners and service delivery agents kept informed and engaged throughout the lockdown.</p> <p>The team continued to increase knowledge and adapt to change by attending a workshop on 'Climate Future Plots' (DELWP) and several online seminars.</p> <p>A team member continues to be on DELWPs 'Scientific Sub-Committee' to develop opportunities in delivery of the Biodiversity 2037 Plan.</p> <p>A project officer is a representative on the Warby Ovens National Park Advisory Committee, that is developing a plan for the parks.</p> <p>The team provided submissions on Review of <i>EPBC Act</i>, Drought Resilience Fund, 'Climate Future Plots', the Victorian Parliaments investigation into 'Ecosystem decline' and the <i>Wildlife Act</i>.</p>
Biodiversity strategic direction 2: Nurturing partnerships	
<p>The Biodiversity team continues to have a focus on building on and nurturing partnerships, with agencies, community networks and groups, indigenous groups and individuals.</p> <p>Partnerships are growing, which is reflected in the development and delivery of partnership projects.</p>	<p>The team continues to work with a diverse, and increasing, range of partners to provide opportunities for collaboration, cross-promotion of projects, and information-sharing, through symposia, media, and community engagement.</p> <p>Key Partners include: Taungurung Land and Waters Council (TLaWC) and Yorta Yorta Nation Aboriginal Corporation (YYNAC): Partnership opportunities are developed through formal and informal meetings. The team assisted Taungurung Land and Waters Council (TLaWC) to begin a business to create a works crew. YYNAC Woka Walla crews continue to be preferred contractors, providing significant employment and training opportunities.</p> <p>DELWP: Working with regional staff to deliver 'Ribbons of Blue and Sashes of Green' project (DELWP Biodiversity Response Planning); Planning for the next round of BRP; continue to collaborate with DELWP compliance officers, to provide information on Native vegetation clearing regulations and other planning and permit processes.</p> <p>Parks Victoria: Joint project delivery includes: Goat control in Heathcote -Graytown National park and surrounding public land areas (BRP); and pest plant and animal control in Barmah National Park (RLP).</p> <p>Australian Government: working together to deliver RLP projects, develop monitoring protocols for next round of RLP and providing feedback on Threatened Species Strategy.</p> <p>Mount Buller Mount Stirling Resort Management: working with TLaWC for effective delivery of the project 'Mending Mountains for Pygmy-possum'(RLP).</p>

Biodiversity strategic direction 2: Nurturing partnerships (continued)

Key Partners continued:

Local Government: Despite COVID-19 virtual, quarterly meetings of the Goulburn Broken Local Government Biodiversity Reference Group were convened, building capacity and networking of local governments environment officers and others (Regional Roads Victoria, CFA, and DELWP). Meetings included: presentations from the Office of the Conservation Regulator (DELWP compliance and firewood issues; Horse Management in the High Country and Barmah National Park (Parks Victoria); Victorian Koala Management Strategy (DELWP); *Flora and Fauna Guarantee Amendment Act (2019)* (DELWP); Mitchell Shire growth rates and planning tools; and Goulburn Broken Regional Catchment Strategy Renewal. The group provided key input into the Native Vegetation Regulations Compliance and Enforcement Toolkit – A guide for Councils. The Group provided a submission to the Inquiry into Ecosystem Decline in Victoria; and continued to support one another on a range of biodiversity issues such as pest plant and animal management and native vegetation management.

Goulburn Broken Indigenous Seedbank and Euroa Arboretum: Goulburn Broken CMA continues to support the Goulburn Broken Seedbank, that has been managed by Euroa Arboretum since 2019. Euroa Arboretum has the knowledge and enthusiasm to progress the Seedbank into the next 10 years of sustainable native seed collection and supply for the delivery of revegetation.

The growing demand for native seed and/or revegetation includes plantings for biodiversity and carbon sequestration, by a growing number of corporations and landholders.

Community Networks: Seven community groups and one network were engaged as service delivery partners; increasing their capacity, delivering incentives to landholders and community engagement projects. The partners were: Longwood Plains Conservation Management Network; five Landcare Networks (Up2Us, South West Goulburn, Upper Goulburn, Goulburn Murray, and Gecko CLaN); and two 'friends groups' (Regent Honeyeater Project and Euroa Arboretum). Monthly meetings are held to ensure collaboration and best practice delivery of all projects.

Landcare: Due to COVID-19, delivery of the Victorian Government's Landcare Grants from 2019-20 was extended to June 2021. Goulburn Broken CMA continued to provide support to the 24 projects and 21 organisations affected by this extension.

Landowners: 361 landowners are under ten-year conservation agreements that now cover a total of 7,182 hectares (from previous and current projects). Many other landholders are engaged in a variety of ways other than incentives, such as providing tree guards for emerging paddock trees.

Volunteers: COVID-19 has seriously restricted the ability for volunteers to participate in environmental works.

New and emerging partnerships: As more National companies are investing in large tracts of land and revegetating at the landscape scale the team is providing revegetation expertise for biodiversity outcomes including Kilter Rural and Odonata.

Research Agencies: Adapting actions based on the best science continues with our partnerships with a range of Universities and research institutions, such as universities; Latrobe, Melbourne, Monash and Charles Sturt, TERN and CSIRO.

Long-term strategy implementation progress	2020-21 performance
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:</p> <p>University of Melbourne: 3 projects continue but have been affected by COVID-19 restrictions: 1. Assessment of large-scale tree deaths due to climate change in the Strathbogie Ranges, 2. Ground water dependent ecosystems in the Strathbogie Ranges, and 3. State and Transition Modelling to better understanding change in quality of vegetation due to interventions.</p> <p>Bogong Moth surveys: Mending Mountains for the Pygmy-possum project, to determine future management options to ensure adequate food resources.</p> <p>Mountain Pygmy-possum: 2020 spring surveys indicated good numbers of possum recruitment despite recorded litter losses in previous season.</p> <p>Silver Banksia is a focus for the Goulburn Broken CMA and many statewide groups (e.g. Australian Network for Plant Conservation and CSIRO), in improving genetics and revegetation techniques. The team partnered with CSIRO and Deakin University to develop guidelines for the Banksia seed production areas.</p> <p>Australian National University: Survey sites have been identified for valuing biodiversity on farms, including trees, farm dams and revegetation.</p> <p>La Trobe University: Project has determined that revegetation is just as important as remnants in ensuring a diverse and abundant bird community.</p>
Biodiversity strategic direction 4: Building on our ecological infrastructure	
<p>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.</p> <p>Ongoing efforts are required to promote synergies between biodiversity conservation and land management at the farm and landscapes scales.</p> <p>Conservation Management Networks continue to play a valuable role in promoting the importance of biodiversity conservation across land tenures.</p> <p>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.</p>	<p>Land Management Crews: Woka Walla and Taungurung land management crews delivered environmental management across Country, to control pest plants and animals, and increase extent and diversity of habitat through revegetation activities. The crews carried out cultural burns on public and private land, in partnership with Goulburn Broken CMA, CFA, Parks Victoria and DELWP.</p> <p>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, increasing stepping stones through protecting emerging paddock trees.</p> <p>More expressions of interest for incentives to carry out environmental works continue to be greater than funding available.</p> <p>Losses of native vegetation includes: large trees and clearing (under permit), and unmeasured losses due to tree dieback, illegal clearing, firewood collection, ploughing of native/derived grasslands for cropping, and fire (planned and wildfire).</p> <p>Australian Government funded projects:</p> <p>Linking Landscapes and Communities: conserving Grey Box Grassy Woodlands and Derived Native grasslands project delivered 20 10-year land management agreements for improved stewardship over 218 hectares; 819 hectares of pest animal control, 643 hectares of weed control, 182 hectares of stock grazing removed.</p> <p>The 'On Your Guard' paddock tree guard program distributed 528 purpose-built paddock tree guards, for 92 landholders. Farmers collect the guards, which has proven to be an effective way to communicate one-on-one during times of COVID-19 restrictions.</p> <p>The Mending Mountains for Pygmy-possums project increased and improved the critical Mountain Pygmy Possum habitat areas at Mount Buller through 6 hectares of revegetation (with a focus on food resource plants), 1,000 hectares of cat control, and 15 hectares of weed control. Project outputs align with recovery plan objectives at State and Federal levels.</p>

Long-term strategy implementation progress	2020-21 performance
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Biodiversity strategic direction 4: Building on our ecological infrastructure (continued)

Australian Government funded projects (continued):
 The **Buxton Gum Revival Project** increased knowledge of current extent of Eucalyptus crenulata in the Acheron Valley through 15 hectares of site surveys. Eucalyptus crenulata populations through revegetation for the long term resilience of this endangered species. Engagement will occur with landholders through the survey and revegetation works to raise the profile of the species and encourage protection of remnant and new sub-populations will be planted in identified suitable habitat areas. Delivery of these actions will be in consultation with Euroa Arboretum and Taungurung Land and Waters Council.

The **Barmah Country** project delivered 400 hectares of weed control, two fox baiting events across 30,000 hectares and two pig/feral animal control events removing 502 fallow deer and 8 feral pigs across 10,000 hectares of Barmah National Park (Regional Land Partnerships). Critical to the success of our projects is the availability of seed and plants.

Victorian Government funded projects:
Ribbons of Blue and Sashes of Green (BRP): This project focused on the Heathcote-Graytown National Park and Rushworth State Forest. Taungurung Works Crews controlled 1851 hectares of weeds, Parks Victoria controlled goats over 35,816 hectares and on private land there are land management agreements over 455 hectares, that include activities such as revegetation and pest plant and animal control.

Our Catchment Our Communities (Taking Care of Country): delivered 256 hectares of improved stewardship of land, through 10 year management agreements.

Landcare Grants: community engagement, pest plant and animal control, and threatened species protection.

Other: Working with Kilter Rural revegetated 130 hectares in a priority landscape of the Agricultural Floodplains SES.

The **Goulburn Broken Indigenous seedbank** provided:
 sales to nurseries = 36.165 kg, sales for direct seeding = 113.488 kg,
 seed collection = 87kgs

Biodiversity strategic direction 5: Legitimising biodiversity conservation

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.

Despite COVID-19 restrictions, Goulburn Broken CMA used a wide variety of communication methods to promote projects and raise awareness of biodiversity, including field days, signage, media and flyers, one-on-one discussions about paddock trees, and several virtual meetings with service delivery partners.

Local ABC radio monthly radio segment focusing on the catchment's flora and fauna with Matt Dowling continues to be popular.

Traditional, Web and Social media: Newspaper articles included Stories about the tree guard project which initiated more interest in people receiving guards. Many social media articles about wildlife of the Grey Box Grassy Woodlands.

Booklets and flyers: Booklets included 'the Ground-Storey' to inform farmers about the importance of not-cleaning up. This resulted in many requests for the booklet including schools and NRM groups.

Presentations and 3 field days including one held with the Fawcner scout group (culturally diverse group) planting trees as volunteers.

Community engagement: Conferences and seminars: Virtual seminars were attended by a range of staff, including a 'Project Phoenix' by Greening Australia, national workshops, which was over multiple days developing a native seed production strategy, e.g. governance, demand and supply conference. 'Right plant right way' conference attended that was developing ways that Indigenous groups can be involved in the revegetation industry.

Community capacity, engagement and involvement

Long-term strategy implementation and 2020-21 performance related to the community are included throughout the previous table.

Actions 2018-19, 2019-20 and 2020-21

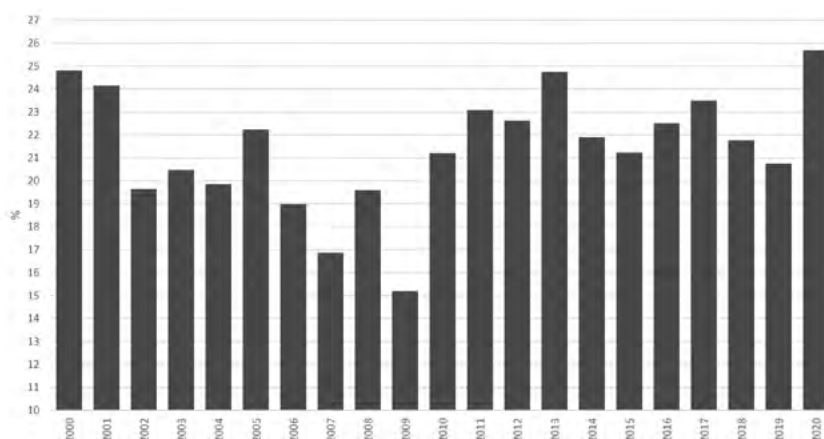
Action		From funds received					% achieved
		Achieved ⁱ			Target		
		2018-19	2019-20	2020-21			
Stock grazing management action							
Fence terrestrial remnant vegetation	ha	331	547	365	289	126	
Fence wetland remnant	ha	2	8	-	-		
Fence stream/river remnant ⁱⁱ	ha	166	112	153	-		
Binding management agreement (licence, Section 173, covenant) ⁱⁱⁱ	ha	-	6	11	75	15	
Grazing regime change	ha	-	-	-	-		
Habitat loss management							
Revegetation – plant natives	ha	625	634	607	325	187	

- i. Achievements include those from complementary investment areas (SIR salinity, Riparian and instream habitat and channel form and Dryland salinity). For a full list of footnotes please see Appendix 4.
- ii. Area figure supplied by River and Wetland Health Program Manager.
- 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.

What's next?

- Continue to support Traditional Owners in their endeavour to build skills, knowledge, and capacity to deliver works on country, and have a greater influence in natural resource management planning.
- Traditional Owner led burning programs will continue to be a focus across the Catchment both on private and public land.
- Climate Change will continue to be a focus for programs, 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.
- Deliver projects that align with aspirations and objectives of TLaWC and YYNAC Country Plans through OCOC (EC5)
- Contribute to implementation of the RCS.
- Continue to promote systems-based approaches for land management to achieve whole-of-farm and catchment outcomes for both biodiversity and agricultural productivity through the 'Nature@Work' program.
- Continue to integrate climate change adaptation into strategies, planning and project design.
- Deliver a range of DELWP and NLP funded projects.
- Continue to work with a range of partner agencies to add value to projects.

Goulburn Broken Catchment Tree cover change ⁱ



- i. Source: Australian National University - Fenner School of Environment & Society. In 2020-21 there appears to be a relatively large increase in tree cover than in previous years. While this general trend is probably right, an increase of 4% across the catchment, which would be approximately 45,000 hectares seems way too high (note in our extent increase graph, we estimate that the change in extent is less than 2000 ha, but that is likely to conservative). The assumptions and quality of the data provided by ANU needs to be considered when interpreting this graph. Confidence levels included each year would assist in knowing the degree of uncertainty.

Investment area - Land

Compiled by Ashley Rogers, Rhiannon Sandford, Tony Kubeil, Karen Brisbane-Bullock, Kerstie Lee, Steve Wilson, Kate Cunnew (AgVic), Jaye Caldwell (AgVic) and Brad Costin (AgVic).

Long-term and annual scorecard ⁱ

2020-21 performance	Exceeded target		
Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	MEDIUM

The increased awareness of how soils can be improved is being applied on many farms. However, the changing demographic in the south of the catchment is affecting the use of private land, this is likely to increase in coming years.

The purpose and use of private and public land have generally improved (especially grazing in sensitive areas).

Catchment-wide invasive plant and animal management is now mainly 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 from existing and emerging threats like deer in the alps, foothills and plains; feral horses in Barmah National Park (especially when extremely dry) and key weed species in priority areas. Mice and rabbits also had a significant impact in 2020-21.

Stubble burning increased following a good season in 2021 creating further pressure on soils in the Catchment.

There has been an increase use of public and private land for recreation during COVID-19 in Victoria, this has increased people connecting with nature but has also driven rise to some management issues (rubbish etc.)

Resilience assessment						Long-term strategic implementation ^v	
Critical attribute affecting long-term catchment health	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}			Start	Stage
	1990	2021	Trend 2018-21	Long-term (10+ years)			
				Current support ^{vi}	No support ^{vi}		
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 related to land use limited. Certainty around the purpose and use of private land is moderate to low with up-to-date data required to confirm our assessment and annual changes in, for example, ground cover highly likely. Certainty around purpose and use of public land is low as condition can change annually, however there is high confidence that the system is declining. There is high confidence in invasive plants and animals ratings supported by major reductions in investment from state and federal sources and a good understanding the current regional drivers as described in the 2019-20 renewal of the pest plant and animal plan.

- 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 2021.
- 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

2018-19	2019-20	2020-21	2021-22 ⁱ
435	428	622	480

- i. Forecast is based on the Corporate Plan 2021-22.

Strategic references

The Goulburn Broken Land Health Strategy 2017-2020 guides investment of public funds in improving the Catchment's land resources, with a significant focus on soil health. 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 State 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 5 includes a more complete list.

Background

Land is a part of the environment that is used and valued by all sectors of the community for many and varied reasons making it difficult to define a rating condition to encompass all uses. Good condition for one use may be poor for another, for example, a cleared paddock may yield good crop, yet it will be poor for terrestrial biodiversity and habitat. We tend to compartmentalise these different land uses in the catchment. However, if we look at the natural resources that underpin healthy land and support its function, we can devise indicators that are fit for many uses. For example, ground cover provides functions such as reducing evaporation from soil and protects it from wind and water erosion, and it may be provided through stubble in a cropping system, pasture and litter in a grazing system, and vegetation and litter in a reserve. Soil organic carbon provides water holding capacity, food for microorganisms and good soil structure and needs to be protected no matter what the land use, through actions such as reducing soil disturbance and maintaining litter in burning regimes.

This section helps to identify the most important land-related social-ecological issues. Four critical attributes for long-term resilience are proposed (see scorecard page 59).

Public land is managed for conservation, recreation and forestry, and while its management is outside the scope of the land program, many management actions align across all tenures, with the condition of soil, ground cover and species diversity important factors for land health and function in all tenures. Management actions targeted at improving soil condition, such as actions to improve water infiltration, litter cycling and soil organic carbon levels, in the same way they are targeted for soil management on private land, would improve the health and function of public land for increased community services such as soil carbon sequestration, reduced risk of erosion, litter cycling and removal, and land rehydration.

Two-thirds of the Catchment is private land that is mainly used for agriculture: farmers are the largest custodians of private land and are therefore responsible for a large part of the Catchment's natural environment.

Farmers respond to fast and slow changes affecting their operating environment such as world markets, changing technologies, climate change and variability, and water availability. The challenge of maintaining profitability in the face of rapid changes can, in the short term, impact on the sustainable management of a farm's natural resource. Supporting farmers to manage their land sustainably benefits farm profitability, ecosystem health, social wellbeing and increases communities' capacity to prepare for, and respond to, change.

The Australian Government invests in the Goulburn Broken Catchment's 'land' via the 'From the Ground Up' project and Regional Agriculture Landcare Facilitator project, funded through the National Landcare Program. The Victorian Government invests in 'land' through various fund sources, including Victorian Biodiversity Response Planning, Landcare and Good Neighbour programs, Local Government Roadside Weeds and the Goulburn Broken CMA Waterways programs. Although there is no dedicated funding for many aspects of land, such as soil conservation works (e.g. gully erosion management), the Goulburn Broken CMA is able to influence land outcomes through investment in complementary project activities,

such as: through the CMA's role as a referral authority on flood-prone land, community extension and engagement, and participation in multi-stakeholder forums. Where possible, the Goulburn Broken CMA implements works to complement community projects funded through programs like the Australian Government's National Landcare Program and the Victorian Landcare Program.

Soils for agriculture

Australia's ancient soils need care if they are to have sufficient structure and fertility to maintain agricultural productivity into the future. The capacity of soils to support agriculture long-term can be compromised by the pressure on land managers to maximise productivity in the short term. It is in the national, regional and local communities' interest for land managers to build long-term capacity and health of soils so that existing agricultural enterprises can be sustained, or alternatives pursued.

Agricultural soils are in areas that have been largely cleared and cultivated for dryland and irrigated cropping and pastures, horticulture, viticulture and grazing.

In the late 1980s, in non-irrigated parts of the Goulburn Broken Catchment, agricultural soils were in very poor condition across broad areas. Shallow-rooted annual pastures were dominant, and other 'features' of the landscape were sheet and gully erosion, and compacted, waterlogged and salinised soils. Sheep grazing in the hills and cattle grazing in and along much of the Catchment's waterways also contributed significantly to poor soil condition. This also impacted water quality in the Catchment's waterways, with high levels of turbidity, salinity, and nutrient loads.

Since 1990, perennial grasses have been returning to steep hills and farmers are increasingly aware of the importance of groundcover, revegetation of eroding gullies, and soil acidity and management. While our current understanding and management of livestock in dryland pastures has improved, in the last ten years drought, dry springs, poor autumn breaks, proliferation of pest and native grazing animals, has seen a return in areas to low cover and bare ground. Sub-soil acidity is an emerging issue with broad-scale current management practices such as 0-10cm soil testing, bulk sampling and top-dressing lime, unlikely to be addressing the issue.

Working with partners, the Goulburn Broken CMA helps farmers meet long-term goals for soil health; capacity to store carbon, hold water, and support soil biodiversity. These long-term goals for soils are tackled by increasing soil organic matter, addressing soil acidity, fertility, water erosion and salinity.

Catchment condition (since 1990)

Long-term objectives: Between 2017 and 2023:

- Increase to or maintain soil pH at or above 4.8-5.0 (CaCl₂) on agricultural land.
- Improve or maintain soil organic carbon equal to or above 2 per cent in annual cropland, and equal to or above 5 per cent in pasture and permanent plantings.
- Maintain greater than 70 per cent groundcover 100 per cent of the time on agricultural land..

Apart from the Agricultural Floodplains SES, soil pH is mostly in a range where plant nutrient uptake is affected by soil acidity, which is generally understood and managed by farmers. However, our understanding of soil acidity and its impact through the soil profile is changing through stratified soil testing and studies of top-dressing lime at different rates. We need to review and revise extension messages and materials to identify sub-soil acidity issues and practices to manage it where top-dressing is the best option, for example, in hill country with established pastures where soil disturbance through cultivation is too risky.

Across the Catchment, the median soil organic carbon level is 2.7 per cent, although significant spatial variation has not been related to land use, prompting caution in interpreting this figure.

Ground cover and soil organic carbon are the key to making the most use of rain when it falls and therefore healthier, more resilient soils for sustainable management of the catchment. Chronic soil problems, such as compaction, acidification, erosion, and soil carbon loss, are not immediately obvious, prompting the need for soil assessment and education around maintenance of healthy soils to determine potential solutions.

In 2020-21 cropping industry partner organisations, Riverine Plains Inc. and the Irrigated Cropping Council continued to investigate opportunities for increasing soil organic carbon through plant-based inputs and cover crops. While more soil organic carbon ought to be highly beneficial for crop production, generally practices require further refinement and investigation of their cost-benefit and potential impacts on cash crop yield and performance.

Saline discharge sites remain present and active, with most sites able to be managed, confining impact to the local site or farm. It remains an expectation that saline discharge will emerge as a more obvious problem in wet years.

While we have no data for soil health on public land, it is likely that forest fuel management actions, such as planned burns, and wildfires have a significant impact on soils. Impacts are likely to include nutrient cycling, soil hydrology (hydrophobic soils), soil organic carbon levels, ground cover, and soil-biota species diversity. Where these management actions can be implemented in a cultural (cool burn) manner, it is likely these processes will improve not just the health of soils in public land, but also their contribution to ecosystem services, and ultimately functioning soils, on which all vegetation relies.

Ground cover in agricultural land, April 2021

Wind and water erosion risk has been mapped over broad geographic areas. Methods for setting and communicating groundcover targets and evaluating progress need to be considered carefully. Factors to consider include:

- groundcover is critical in preventing erosion, however the amount of groundcover needed varies considerably with topography, soil type, rainfall and land use
- seasonal conditions impact dramatically on achievable groundcover.

The report 'Hillslope erosion of the Goulburn Broken Catchment – An assessment of ground cover using RaPP Map' June 2021, identified areas of intersecting high erosion risk and low ground cover and provides recommendations to ground truth these areas for satellite mapped cover and identify existing land management practices to get a better understanding of the residual risk and options for management.

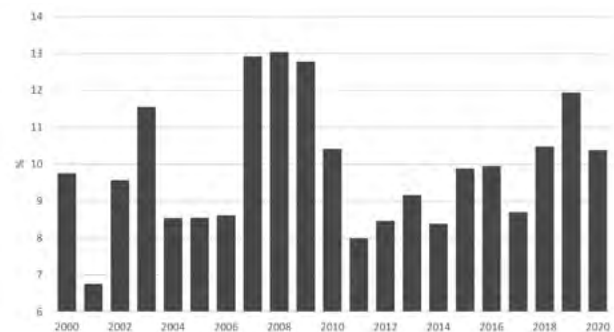
Agricultural land is defined as cropping and grazing land and covers 66 per cent of the Catchment. When ground cover is above 70 per cent, it is deemed to be protected from both wind and water erosion.

In April 2021, ground cover data obtained from RaPP Map showed 90.2 per cent of agricultural land might be protected from erosion because it had greater than 70 per cent cover. The flip side, 9.8 per cent of this area (154,418 ha) is vulnerable to erosion. For comparison, in April 2020 89.1 per cent of agricultural land had at least 70 per cent cover.

April is generally the point of lowest ground cover. April 2020 and 2021 show similar soil protection levels of around 90 per cent, reflecting good late summer/autumn rainfall.

It should be noted that RaPP Map uses remotely sensed data with a resolution of around 500m so fractional ground cover changes over small areas are not likely to be picked up. It also needs to be noted that under dense tree canopy, ground cover cannot reliably be discerned from overhead canopy cover so only land with less than 20 per cent canopy cover is used to determine ground cover. These limitations are noted and addressed in the 'Hillslope erosion of the Goulburn Broken Catchment – An assessment of ground cover using RaPP Map' June 2021 with recommendations to develop ground truthing monitoring to check and or improve the accuracy of our reporting.

Goulburn Broken - Percentage of exposed soil ⁱ



i. Source: Australian National University - Fenner School of Environment & Society.

Purpose and use of private land

As well as how land is used, the purpose of what land is used for is significant in determining its capacity to meet short and long-term needs. The purpose of what land is used for is closely linked to how it is used. For example, if it is used specifically for cropping or for nature conservation. It is important to work with local governments through their planning processes to match what land is used for to its capability. The planning scheme should also be an important tool for management and protection of remnant vegetation as rural land is developed for residential living.

Private land has many uses. As markets, climate, land value, farmer age and other aspects of farming change, some farmers are choosing to retain their existing enterprise and adapt their approach and management practices (the 'how' land is used). Others may have transitioned to a completely different purpose (the 'what' land is used for).

Catchment condition (since 1990)

There are opportunities for both biodiversity and agricultural outcomes to be realised within farms and across landscapes. Native vegetation corridors, for example, provide woodland bird habitat, increase beneficial insects, pasture and stock shade and shelter, increasing livestock welfare and productivity. Some farmers are treating large areas of their farms differently than in the past and, with financial support, are protecting vegetation and revegetating. In many circumstances this action is taken to protect soil and at the same time may enhance biodiversity. While it is aesthetically pleasing and may represent an increase in land value, it is often at significant cash cost to the landowner and does not always generate a yield return or increase.

Water policy reform and reduced water availability over the last decade is forcing fundamental changes in the 270,000 hectares of the Shepparton Irrigation Region (see Sustainable irrigation section page 68).

Elevated land values continue to drive farm subdivision and land turnover, and this increased markedly due to the 'tree change' driven by COVID-19.

Where appropriate, Goulburn Broken CMA and partners encourage farmers to provide broader community benefits by using areas of native vegetation, waterways and wetlands for more passive purposes. These aspects of land-use purpose 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 pasture cropping, multi-species cover cropping, regenerative grazing and integrated pest and disease management. Anecdotally, regenerative grazing has shown a return of ground cover in degraded areas and a return to perennial dominated pastures in other areas. Whilst these are good NRM outcomes, we need to monitor the impact on farm profitability and productivity.

Purpose and use of public land

The primary purpose for the use of 800,000 hectares of the Catchment's public land is largely set: it is primarily reserved for environmental and cultural conservation, recreational activity, nature-based tourism and timber harvesting.

Active management of public land is needed in areas of relatively more passive use because visitor numbers are

rapidly increasing and, along with invasive plant and animal pressures, can lead to negative environmental and cultural heritage impacts. For example, illegal rubbish dumping, driving on sandhills, weed spread via vehicles, or firewood collection without a permit, can reduce habitat for native species and impact on Traditional Owners' cultural heritage.

People fish and camp along the Catchment's many waterways, including Victoria's largest and most preferred fishing locations: the Goulburn River, Victoria's most popular lake for fishers, Lake Eildon, and the world's largest red gum forest in Barmah National Park. The proximity of the Catchment's Alps to Melbourne make them a prime destination for visitors.

Goulburn Broken CMA helps partner agencies manage public land and stakeholders identify actions needed to meet short-term community expectations, while aiming for long-term resilience.

Catchment condition (since 1990)

The overwhelming trend in what public land is used for has been towards more passive purposes, such as conservation and recreation. Large areas have undergone a change in reservation status since 1990. National Parks such as the 9,310 hectares Lower Goulburn National Park and the 28,500 hectares Barmah National Park have been established. Licences to graze Crown frontages along streams have been revoked as part of establishing these national parks, and significantly tighter restrictions have been placed on other existing Crown frontage licences. The changed reservation status has benefited native vegetation and associated ecosystems, improving water quality and habitat for biodiversity.

Although environmental resilience has improved as a result of these changed purposes of land use, significant challenges remain or have emerged, like fire, climate change, invasive plants and animals, and increased recreation pressure (see www.heartofvictoria.com.au/nature-at-its-best).

Some pockets of tension between personal and broader community purposes, such as those related to logging, deer, or feral horses, require significant whole-of-stakeholder commitment to resolve.

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. 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, AgVic endeavours to provide support through targeted compliance programs.

Goulburn Broken CMA participates in the North-East Deer Round Table forum. During COVID-19 this forum has retained a level of contact via electronic means.

Goulburn Broken CMA also assists DELWP with linkages to local landholders in the Holland/Ryans Creek catchment and the Warby ranges to undertake feral pig control.

Community groups are leading coordination of local weed programs. In Mansfield, Up2Us Landcare Alliance coordinates state and local agencies to collaboratively make the biggest impact on weeds through an annual weeds 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.

The Gecko CLaN successfully obtained funding to assist several local landholders in the Upper Ryans Creek catchment to construct a wild dog fence. This project was delivered in collaboration with DELWP with a substantial reduction in wild dog predation on lambs in the first year.

Catchment condition (since 1990)

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. Adult Sambar Deer are 2.5 Dry Sheep Equivalent, pressuring many agricultural industries and enterprises. Kangaroos can also significantly decrease a farm's stock carrying capacity.

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

Long-term strategy implementation progress and 2020-21 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 28).

Integrated delivery via Land, Biodiversity and Indigenous Team

The Goulburn Broken CMA's Land, Biodiversity and Indigenous Team supports the delivery of actions through state and federal funding streams. This recognises that to be resilient, systems within and beyond the farm fence require a focus on connections between all elements, including ecosystems, productive land, and communities.

Team members work closely with relevant agencies such as Parks Victoria, DELWP, AgVic, local government, water authorities, the Country Fire Authority, community groups and individuals.

Funding to community groups included the Victorian Government's Landcare grants, Communities for Nature projects, and delivery through the CMA of the Australian Government's National Landcare Program.

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 and conserving biodiversity.

During 2020-21, our Australian Government-funded project, 'From the Ground Up' delivered activities via 15 sub-projects worth \$223,194 through Goulburn Broken CMA and project partners (see Key partners box below).

Activities included 15 demonstration sites, 31 workshops, 9 field days and 57 communication materials. 1,132 people participated in program activities, 571 of these were farmers managing more than 180,000 hectares.

Due to COVID-19, delivery of the Victorian Government's Landcare Grants from 2019-20 was extended to June 2021. Goulburn Broken CMA continued to provide support to the 24 projects and 21 organisations affected by this extension.

Invasive plants and animals

Different pest plants and animals are targeted through various fund sources, including Victorian Biodiversity Response Planning, Landcare and Good Neighbour programs, Local Government Roadside Weeds, NLP Linking Landscapes and Communities project and the Goulburn Broken CMA Waterways 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.

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. During 2020-21 COVID-19 had a significant impact on community's ability to undertake onground works. The usual information sharing methods of on site inspections and community field days were not possible under the social distancing regulations. Consequently messages were not as effectively shared and a large reduction in onground works occurred.

Landcare and DELWP have partnered to assist the community to access permits for the control of overabundant wildlife and to be included in the kangaroo pet meat trial. With the severe fire season and the COVID-19 pandemic there was some confusion about the

Key community groups and partners include:

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 Cropping Council, Maize Association Australia, Riverine Plains Inc., Vic No-Till Farmers Association.

Landcare and community groups: Friends of the Marysville Walks Inc., Turtles Australia Inc., Fords Creek Landcare Group, Euroa Arboretum Inc., Strathbogie Tableland Landcare Group, Kyabram Urban Landcare Group, Greta Valley Landcare Group, Granite Creeks Project Inc., Gooram Valley Landcare Group, Creightons Creek Landcare Group, Molyullah Tatong Land Management Group, Glenaroua Land Management Group, Warby Ranges Landcare Group, Yea River Catchment Landcare Group, Strath Creek Landcare Group, Murrindindi Climate Network.

continuity of the program but landholders continued to be in desperate need of assistance.

Investment in community-driven blackberry control works continued, in parallel with AgVic and existing Blackberry Action Groups.

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 GMW continue to monitor and implement control activities in at risk waterways for aquatic weeds e.g. Cabomba and Arrowhead at Lake Benalla and Broken Creek.

AgVic Invasive Plants and Animals activities in 2020-21 were impacted across the state by staff deployments to biosecurity and emergency responses including the Avian Influenza, Khapra Beetle and Abalone Viral Ganglionneuritis responses, as well as staff deployments to the Gippsland Severe Weather Event.

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

- Regionally Prohibited Weeds (9 projects, including 7 compliance projects and 2 surveillance projects): targeting Serrated Tussock, Artichoke Thistle, 1 and 2 leaf Cape Tulip and ragwort; 203 properties and public land sites inspected; 13,000 hectares inspected; 11 Directions Notices issued, with all land owners complying.
- Granite Creeks area Rabbit compliance project: 61 properties and public land areas targeted; 3000 hectares inspected; 1 Direction Notices issued; Required control works were conducted on several properties by land owners.
- Sunday Creek – Waterford Park area Blackberry compliance project: following on from a previous extension project, 7 properties covering approximately 900 hectares inspected; 3 Directions Notices, 3 Land Management Notices, with subsequent Infringement Notices issued. Required control works undertaken on several properties by landowners.
- An extension project near Reef Hills Benalla targeted Gorse. 21 public and private properties targeted, 780 hectares. Landowners control works were undertaken voluntarily.

State Prohibited Weeds sites were monitored and treated where required: 3 Water Hyacinth sites monitored; 5 Camel Thorn sites monitored and treated; 1 Giant Knotweed site monitored; 3 Mexican Feather Grass sites monitored and two of these sites were nominated for eradicated status. In addition, a surveillance project was undertaken to inspect a dozen high risk areas along an irrigation drain associated with a historical water hyacinth site. No infestations were observed.

As a consistent investor in pest plants and animals, the Victorian Landcare Grants provides funding for the community to undertake Pest Plant and Animal control works. Due to the impact of COVID-19 these grants were not released in 2020-21 however many groups had carryover projects that maintained a small level of control works across the year.

Regional Agriculture Landcare Facilitator and Landcare

The Regional Agriculture Landcare Facilitator sits within the Land, Biodiversity and Indigenous Team. 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 NRM and agricultural productivity to increase their capacity, confidence and participation.

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

Project activities were developed with guidance from an independent advisory group (membership includes farmers and industry representatives), feedback from past participants and results from the annual community group survey. The advisory group contributed to the Regional Catchment Strategy and Land Health Strategy in 2020-2021 but are no longer a formal advisory group for the Regional Agriculture Landcare Facilitator program.

The Regional Agriculture Landcare Facilitator assisted the Regional Landcare Coordinator to develop training options and meetings for the Coordinators and Facilitators within the Goulburn Broken Catchment. The highlight of the 2020-2021 year was organising a two-day conference in Creswick with 35 Landcare Facilitators and Coordinators from across the North-East, North-Central and Corangamite Catchments focusing on peer to peer learning and inclusive leadership.

The project continues to collaborate with the Regional Landcare Coordinator to work with all the partners (see box page 63), involving more than 5,000 volunteers and 90 natural resource management groups.

Land managed for conservation, ha

Protection type	Total ⁱ	Added 2020-21
National parks ⁱⁱ	345,267	0
State parks ⁱⁱ	41,909	0
Trust for Nature covenants ⁱⁱⁱ	1,433	11
Landholder agreements ^{iv}	8,131	474
Other ⁱⁱ	525,601	0

i. Total as at 2019-20

ii. Data from Public Lands Management spatial dataset (PLM25). 'Other' includes Bushland Reserve, Other Reserves And Public Land, Essentially Natural Catchment, Uncategorised Public Land, State Forest, Nature Conservation Reserve, Wildlife Reserve (Hunting), Other (Non Scheduled), Regional Park, Historic Reserve, Streamside Reserve, Natural Features Reserve, Forest Area, Revegetation Area, Parks Victoria Managed Land, Natural Features and Scenic Reserve, Scenic Reserve, Reserved Forest, Wildlife Reserve (Sgr Classification Pending Reservation), Roadside Conservation, Proposed National Parks Act.

iii. Trust for Nature total includes 2010-11 to 2019-20. Added 2020-21 refers to Goulburn Broken CMA-funded sites only.

iv. Includes long-term management agreements (Goulburn Broken CMA-funded sites only).

Land Health Strategy strategic implementation

Long-term strategy implementation progress	2020-21 performance
<p>Strategic objective: Practice adaptive management</p>	
<p>Activities have focused on meeting landholder needs together with delivering investment priorities of the Australian Government's National Landcare Program. 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. Activities are delivered by Landcare Networks and groups, Industry groups, Conservation Management Network (see partners box page 63), the University of Melbourne, AgVic and the Goulburn Broken CMA. Participant surveys provide evidence that landholders do make changes to their land management as a result of participating in program activities. Surveys conducted between July 2018 and June 2021 show that across all investment priorities at least 84.5 per cent of 550 survey respondents said they would make changes.</p>	<p>Through community and industry expressions of interest, From the Ground Up has sponsored 15 demonstration sites of new and emerging practices in the Goulburn Broken Catchment. Many of these sites are ongoing.</p> <p>Demonstration sites include regenerative grazing management; testing stubble and fertiliser treatments aimed to increase soil carbon and crop performance; the impact of different crops on soil carbon level, including options to participate in carbon credit markets; options for soil carbon management in permanent pastures; measurement and management of grazing impacts on soil nutrient redistribution; native vegetation options for increasing pollinators in horticulture and broad acre crops; and cultivating indigenous food crops with training in their nutritional value and productivity. Field days are held annually at active demonstration sites.</p> <p>From the Ground Up has delivered workshops in Holistic Management, soil management, soil organic carbon education and management, soil carbon trading, local options to build farm resilience to climate change, integrated pest and disease management, soil test interpretation, hillslope erosion management, land class fencing, irrigation technology updates, and acid soil management.</p>
<p>Strategic objective: Strengthen partnerships</p>	
<p>Goulburn Broken CMA continues to foster and grow partnerships with industry groups, community networks and groups, and individuals.</p> <p>Partnerships with industry and community Landcare groups are strengthening as reflected in the development and delivery of partnership projects. New community Landcare partnerships were established with Delatite Landcare Group, Molyullah and Tatong Tree and Land Protection Group and Warby Range Landcare Group Inc, as well as Euroa Arboretum with all signing contracts for projects to be delivered in 2021-22. New conversations were also held with Murrindindi Climate Network, with a contract to be signed in 2021.</p>	<p>Goulburn Broken CMA continued to work with AgVic to plan and deliver locally relevant workshops in hillslope erosion management. AgVic produced a report on erosion risk for the Catchment, and a report documenting landholder awareness of, attitudes to, and practices for soil acidity management.</p> <p>AgVic has continued their work supporting agriculture service providers to access new information and skills in soil management and knowledge through its Service Provider Forums.</p> <p>One Sustainable Agriculture Advisory Group meeting was facilitated, providing feedback on emerging issues specific to the development of the new RCS.</p> <p>24 project grants were awarded to Goulburn Broken Catchment community NRM groups through the Victorian Landcare Grants.</p> <p>17 project grants were devolved through the National Landcare Program's From the Ground Up project. Two project partner meetings were facilitated.</p> <p>Five project grants were awarded to Landcare groups and one to the University of Melbourne through the DELWP 'Climate Change Adaptation in Agriculture – Goulburn Broken' project.</p> <p>Regional Agriculture Landcare Facilitator assisted with the coordination of Central Cascades Connection (previously Northern Rivers Round Up) workshop with North Central and Corangamite CMAs to bring together the Landcare Facilitators and Coordinators for peer learning. The conference hosted 35 Landcare Facilitators and Coordinators from across these regions.</p> <p>Goulburn Broken CMA participated in the Indigenous Consultation Working Group and chaired the statewide Dryland Managers Forum.</p> <p>Land Health project team contributed to the priorities setting of the Victoria Drought Resilience Adoption and Innovation Hub - North East node, led by Riverine Plains Inc.</p> <p>Four meetings were held with Australian National University to develop and deliver field activities and identify projects.</p>

Long-term strategy implementation progress	2020-21 performance
Strategic objective: Adapt to land-use change	
<p>Land-use changes continue across the Catchment in response to short-term pressures such as seasonal variation, drought and fire, and long-term pressures such as ageing farmers and increasing competing demands for land resources between farming, lifestyle and urban land use. Drivers include ongoing population growth and migration into and within the Catchment, with COVID-19 seemingly driving demand even higher and raising land prices significantly. 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 including AgVic, Vic No-Till, Irrigated Cropping Council, Riverine Plains Inc., South West Goulburn, Goulburn Murray and Upper Goulburn Landcare networks, the Goulburn Broken CMA has supported decision-making around new and evolving technologies such as organic soil amendments, precision agriculture, regenerative grazing management, irrigation management, and management of soil structure and non-wetting soils.</p> <p>Through the RCS renewal process the Goulburn Broken CMA has compiled new land use and population data showing significant changes occurring within the Catchment, with the character of some areas changing rapidly from traditional agriculture/rural nature to lifestyle and amenity. This has major implications for how natural resources are managed and for what values/benefits. It also changes how we engage with communities in these areas, who with an increasing dependence on off-farm income may not engage with more traditional incentive or group-based programs.</p> <p>Through the Euroa Arboretum and Upper Goulburn Landcare Network the Goulburn Broken CMA are supporting education and capacity building of new landholders and farmers through Healthy Hectares courses and the Upper Goulburn Landcare Network's 'Farmer wants a field' project.</p>
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. 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 is growing.</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>Staff and project partners delivered 40 activities and 15 demonstration sites around resilient farming to more than 1,100 participants, of which 570 were farmers. Thirteen industry and community partners were involved in delivery. Topics included spatial variability in soil acidity and soil organic carbon, soil carbon trading, regenerative grazing, introduction to soils, soil management and soil test interpretation, erosion management, increasing biodiversity in cropping, Holistic Management training, and property planning for small acreage.</p>

What's next?

- Continue to support community-initiated projects through the Landcare Facilitators and Coordinators group, the From the Ground Up partners group, and general expression of interest process.
- Continue to coordinate community education opportunities across agencies and build the 'soil health' community network.
- Continue to invest in Landcare, community and industry groups to deliver soil health and sustainable farming projects.
- Link training packages to promotion of improved management practices.
- Work on the identification of improved management practices.

- Showcase and connect farmers implementing improved management practices.
- Coordinate peer-supported learning opportunities, focused on management solutions and building the soil health community network.
- Continue to build the capacity of community groups and individuals to carry out their own assessments of soil health and management practices in a rigorous and logical way through support of demonstrations.
- All State and Regionally Prohibited weed sites will continue to be surveyed and treated where necessary.
- Review and renew the Goulburn Broken Land Health Strategy 2017-20.

Works and operations

Soils for agriculture, purpose and use of private land - Actions 2018-19, 2019-20 and 2020-21

Action		From funds received				
		Achieved ⁱ			Target	% achieved
		2018-19	2019-20	2020-21		
Fence remnant vegetation	ha	298	486	331	249	133
Irrigation drainage environment plans	no.	-	-	-	-	
New irrigation referrals dryland zone	no.	3	0	4	-	
Improved irrigation dryland zone ^{ii, iii}	no.	6	11	20	-	
Sub-surface water action						
Revegetation – plant natives	ha	487	344	329	279	118
Pasture – plant	ha	-	-	-	-	
New groundwater pumps – public installed	no.	-	-	-	-	
Planning for works action						
Whole farm plans - Level 1 ⁱⁱⁱ	no.		-	-	-	
Whole farm plans prepared - Level 2 dryland zone ⁱⁱⁱ	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.

Invasive plants and animals - Actions 2018-19, 2019-20 and 2020-21

Action		From funds received				
		Achieved ⁱ			Target	% achieved
		2018-19	2019-20	2020-21		
Weed invasion						
Weeds – aquatic weeds controlled/eradicated	km	9	28	8	-	
Targeted infestations of weeds in high priority areas covered by control programs ⁱⁱ	ha	2,099	5,773	11,533	11,889	97
AgVic Biosecurity & Agriculture Services works - Targeted infestations of weeds in high priority areas covered by control programs ⁱⁱⁱ	ha	20,995	14,000	19,234	19,285	100
Pest animals						
Pest animal control ^{iv}	ha	1,429	112,621	124,720	102,643	122
AgVic Biosecurity & Agriculture Services works - Area of high priority rabbit infested land covered by control programs ⁱⁱⁱ	ha	3,486	1,806	3,002	3,002	100

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 DJPR AgVic Biosecurity & Agriculture Services (outside of the Corporate Plan).

iv. Output included since 2018-19, superseding the two separate outputs of fox and rabbit control (excluding the DJPR AgVic Biosecurity & Agriculture Services rabbit control), to encompass the broader range of pest animals being controlled.

Investment area – Sustainable irrigation

Compiled by: Carl Walters, Chris Nicholson, James Burkitt, Mark Potter (GMW), Mark Turner, Megan McFarlane, Rebecca Caldwell, Rebecca Pike (AgVic), Rod McLennan (consultant), Simon Casanella, Simon Cowan (GMW), Steve Wilson.

Long-term and annual scorecard ⁱ

2020-21 performance On target

Catchment condition ⁱⁱ	1990	2021	Long-term risk
	●	●	HIGH

Shepparton Irrigation Region (SIR) 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.

While water availability for the environment is improving, high unseasonal flows to meet downstream water demands are creating significant impacts to Goulburn River bank vegetation.

Declining water availability for agriculture due to increasing demands and the impacts of climate change is threatening farm and regional viability, making it extremely challenging for the region to adapt to a future with less water.

Water quality has improved significantly and works and long-term dry conditions have stabilised watertables for now.

Intervention is improving some pockets of native vegetation; however most threatened ecosystems remain at high risk. Native vegetation extent is still poor (less than three per cent).

The mix of land use is changing across the SIR, for example the increase in larger and corporate farms, and impacts on natural resources are unclear. However the fast rate of change is creating some uncertainty.

Resilience assessment						Long-term strategic implementation ^v	
Critical attribute affecting long-term catchment health	Contribution to system function ⁱⁱⁱ		Risk to system thresholds/tipping point ^{iv}			Start	Stage
	1990	2021	Trend 2018-21	Long-term (10+ years)			
				Current support ^{vi}	No support ^{vi}		
Water availability for							
- the environment	●	●	▲	MEDIUM	HIGH	2011	Early
- agriculture	●	●	▲	VERY HIGH	VERY HIGH	2015	Escalated response ^{vii}
Water quality	●	●	—	MEDIUM	HIGH	1995	Watch & adapt
Watertables	●	●	—	MEDIUM	HIGH	1983	Watch & adapt
Native vegetation extent	●	●	▲	VERY HIGH	VERY HIGH	1997	Middle
Farm and regional viability	●	●	▲	HIGH	VERY HIGH	2015	Escalated response ^{vii}

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 2021.
- 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.

Government investment, \$000

2018-19	2019-20	2020-21	2021-22 ⁱ
5,509	7,038	4,074	3,655

i. Forecast is based on the Corporate Plan 2021-22.

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 Shepparton Irrigation Region Land and Water Management Plan (SIRLWMP) 1990-2020. Murray-Darling Basin Authority and Victorian Government water and agricultural strategies are also included.

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.

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 six 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 the 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 2020-21, achievements from implementing the SIRLWMP since 1990 were presented to the regional community. This is the first step in renewing the SIRLWMP.

Reporting on regional land salinisation and Murray River salinity impacts is included under Watertables (page 71). Additional salinity management in the broader Goulburn Broken Catchment is reported under Land (page 59).

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.

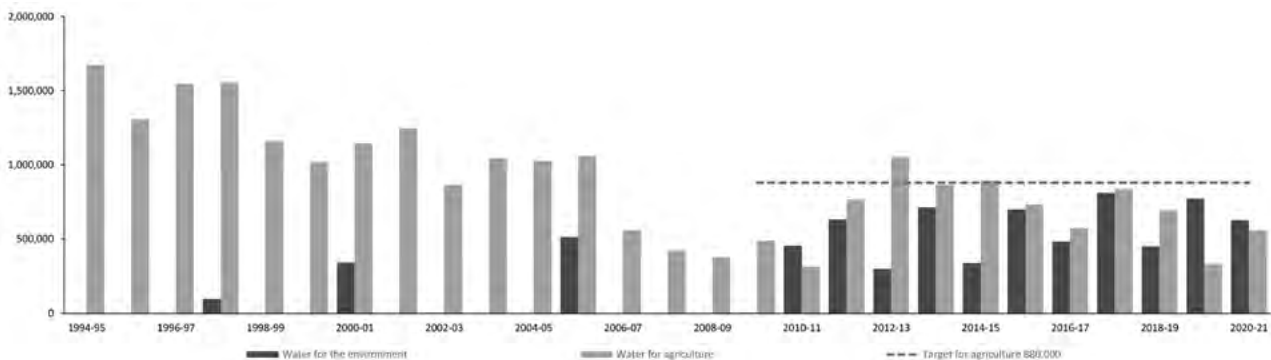
A key challenge is to keep building capability to take advantage of strong regional networks, natural assets, existing regional and farm infrastructure and proximity to markets. Coronavirus (COVID-19) and 2019-20 fires remind us we are part of nature and that food production must be environmentally sustainable

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.

Water delivered for the environmentⁱ and agriculture in the SIR, megalitres



ⁱ includes the New South Wales part of the Barmah-Millewa Forest

a Water availability for the environment

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

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 delivered for the environment also relied heavily on natural flooding to meet objectives, such as getting waterbirds to nest and raise their young through to the fledgling stage.

The 7,245 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 Brays Swamp near Kyabram; 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 40.

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).

The SIR's prosperity depends on water deliveries for irrigated agriculture. Deliveries have declined significantly and are at risk of reducing further.

Downstream of the SIR, large horticultural enterprises continue to increase water use for new permanent plantations and maturing trees. In drier years, horticultural enterprises usually outbid dairying and others for water, resulting in significant net trade of water downstream.

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. They continue to invest and innovate to adapt to reduced water availability and other changes.

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.

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

- salinity in the Murray River
- nutrient loads
- other water quality issues.

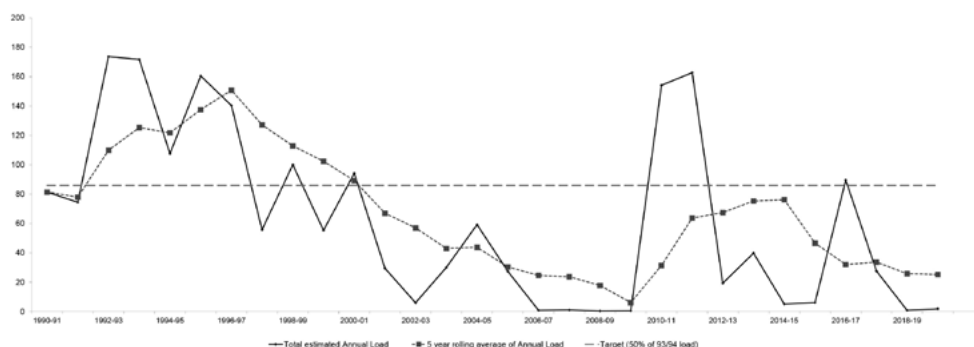
Salt loads from the SIR entering the Murray River are minimal compared to load contributions by downstream irrigation regions. The SIR also contributes significantly less salt than its allocated limit.

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. Counter-intuitively though, the reduction in relatively fresh water from the SIR through more efficient use of water, impacts on the measured 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.

Annual phosphorus loads from all irrigation drains in the Goulburn Broken Catchment, tonnes/year



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 (page 70) are below the long-term targets. Spikes in phosphorus loads are caused by significant rainfall events. Water quality strategy actions have helped to reduce the frequency and severity of these spikes in loads.

Waterways are well within the Environment Protection Authority's thresholds for most other water quality issues, and a watching brief is mostly appropriate (mainly for sudden events and negative long-term trends). In the Goulburn River, regional agency partners are managing increasingly frequent blackwater events caused by upstream rainfall.

Watertables

Long-term objective: By 2020, minimise irrigation-related salinity impacts from shallow watertables on 500,000 hectares.

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 as well as wetlands and streams locally and hundreds of kilometres downstream.

Over the SIRLWMP's life, watertable risks have reduced because of lower accessions (less water reaching the watertable) and improved management when watertables are high or rising. Watertable accessions have reduced because of:

- water-use efficiencies on farms from major, widely adopted improvements
- water-use efficiencies in the regional irrigation delivery system from a major upgrade (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
- land-use change, driving changes in irrigation.

Improved management of high or rising watertables includes a stronger focus on protecting the rootzone within the soil profile. This has 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.

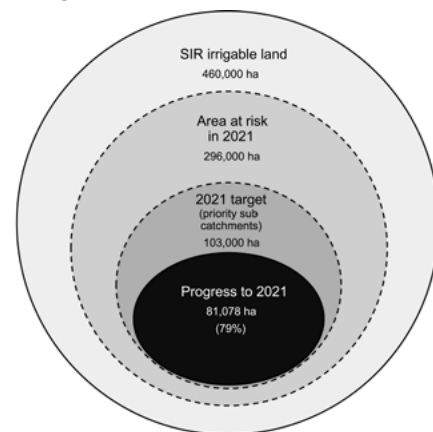
Surface drainage and groundwater pumping buffer and manage watertable accessions resulting from intense rainfall events, which tend to be localised, random and increasingly occur in summer.

Hybrid drainage systems developed and implemented more recently through the SIRLWMP avoid the need for large excavated drains and involve removal of obstructions within drainage courses to restore natural flow patterns. An elegant improvement.

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. 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, 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 and 2016.

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.

The loss of flora and fauna species impacts on the natural environment and our long-term productive capacity and quality of life.

During the twentieth century, the whole SIR system in terms of native vegetation habitat tipped and many species became extinct following widespread clearing for agriculture. More than 97 per cent of plains grassy woodland on private land was cleared.

Remaining native vegetation on private land is largely fragmented and often lacks the shrubs, ground layer, fallen logs and other habitat elements for hosting diverse flora and fauna.

Fortunately, the SIR has significant public land reserves with native vegetation, including:

- the river red gum-dominated, Ramsar-listed, 28,521 hectare Barmah National Park
- corridors along waterways such as the Broken-Boosey State Park and the 9,310 hectare Lower Goulburn National Park
- corridors along roadsides.

Since 1990, native vegetation in these reserves has benefited from a general decline in grazing pressure thanks to initiatives such as private-public boundary land fencing programs and changed Crown frontage licence conditions.

Significant habitat benefits have also been gained on public and private land since 1990 by integrating native vegetation into complementary SIRLWMP activities (see graph below).

Management plans have been developed and implemented for many significant wetlands, such as Reedy, Doctors, Brays and Black Swamps, and for smaller reserves with native vegetation.

There are many examples of increased native vegetation extent along roadsides, waterways and on private land.

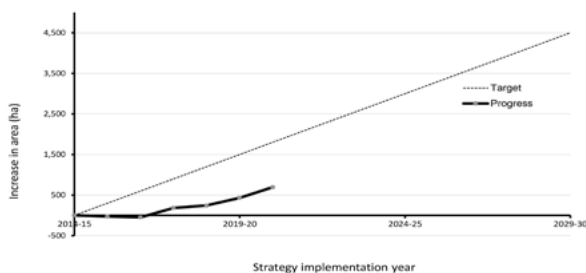
However, despite achieving high levels of stock management, revegetation and other native vegetation improvements through the SIRLWMP and other means, the scale of change is not enough to ensure long-term survival of all native species. Many species are at very high risk now and the system is at very high risk of tipping into a further undesired state.

Clearing (particularly of paddock trees), invasive plants and animals, fire management and climate change continue to degrade native vegetation. Grazing, recreation and inappropriate watering regimes are also impacting on native vegetation quality on both public and private land.

‘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 262 hectares across the nine focus landscapes of the SIR in 2020-21, which is 14.6 per cent of the 1,800 hectare cumulative target by 2020-21. This brings the total native vegetation extent increase to 695 hectares in the SIR since 2014-15. This is only 15.4 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 ⁱ



i. This table 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.

SIR farmers and irrigation-dependent industries have responded by continually innovating and diversifying. Agricultural productivity has increased significantly while using less water and impacting less on the landscape.

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 Connections Project). It has been complemented by world-class farm infrastructure and management.

Demands for advice on energy efficiency and soil moisture monitoring have grown in response to increased energy and water costs. Through SIRLWMP support, irrigators have assessed energy needs and have installed soil moisture monitoring equipment to better understand crop water requirements. 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, people came to realise there were spin-off 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 being rapidly replaced by 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.

Shepparton regional community marks 30 years of ongoing achievement

In 2020-21 the Shepparton regional community reflected on implementing a 30-year plan.

30 years done! Creating a resilient Shepparton Irrigation Region (SIR) 1990 to 2020 records achievements, challenges and changes over the years.

Government investment of \$650 million has been more than matched by farmer and community contributions of \$2 billion to implement over 300,000 hectares of onground actions through 7,057 incentives.

Chair of the SIR People and Planning Integration Committee, Kelvin Bruce, said 'we are proud that our farmers, communities and agencies have worked closely for so long to make large-scale and sensible onground changes happen'.

'Good people keep participating while they have the power to influence the (SIR Land and Water Management) Plan's destiny.'

Ongoing partnerships have also enabled the Plan to adapt to changing circumstances.

'We have not wasted lessons from many unprecedented crises and from mistakes we made,' Kelvin emphasised.

The Plan's focus has broadened from salinity to include water quality, biodiversity, waterway management, water availability, climate change, and community resilience.

While looking forward to the next 30 years, Kelvin warned that 'against a backdrop of climate change, we face ongoing challenges to save species and to ensure all our consumptive and environmental water users receive a fair share'.

Achievements listed in 30 years done! include:

- 4,456 whole farm plans covering 326,092 hectares
- 81 gigalitres of water saved for agriculture and the environment through farm efficiencies
- annual salt loads into Murray River reduced by 6,500 tonnes
- annual phosphorus loads from drains into rivers and streams reduced by over 60 tonnes
- 737 kilometres of drains built
- 52,847 hectares protected by groundwater pumps
- 3,567 reuse systems installed
- 356 groundwater pumps installed
- 1,822 hectares of native vegetation fenced and 2,078 hectares planted or direct seeded on private land
- 330,801 hectares laser levelled.

Long-term strategy implementation progress and 2020-21 performance

Progress towards long-term strategy implementation is satisfactory in some areas but falling behind in others (see the bar chart on page 77). Further details are provided below.

Long-term strategy implementation progress	2020-21 performance
Priority: Update irrigation infrastructure, including the irrigation delivery system and farm design	
<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>Incentives for 4,456 whole farm plans have translated into large-scale changes, such as laser levelling and installation of 3,556 irrigation reuse systems, creating water-use efficiencies across 326,092 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>On-farm adjustments across the SIR were supported, including installation of four soil moisture monitoring systems.</p> <p>Despite the challenges of COVID-19 restrictions, irrigation system and energy assessments were carried out across the 2020-21 irrigation season with positive feedback from irrigators. Refinement of the solar energy component continued as well as the development of remote sensing technology which has improved the assessment process as well as the information generated as a result.</p>
Priority: Build natural resource management into the farming system	
<p>Whole farm plans (WFP) in the SIR have been completed on 4,456 properties covering 326,092 hectares and a further 482 'modernised' plans covering 54,233 hectares have been done.</p>	<p>Following the completion of EC4 funding for WFPs in 2020, the whole farm planning incentive scheme recommenced in mid-June 2021. The hiatus was due to a combination of delays in the announcement of EC5 funding and COVID-19 restrictions. New applications have begun to be taken but no plans have been completed.</p> <p>The Agricultural Redevelopment Coordinator (ARC) Pilot Project continued to help numerous new redevelopment projects in 2020-21. A scoping study has begun to be investigated into the creation of a One Data Platform. The need for such a platform was identified through interviews with redevelopers who had participated in the ARC project. This scoping study is being undertaken collaboratively with Goulburn-Murray Water and Agricultural Victoria.</p>

Long-term strategy implementation progress	2020-21 performance
Priority: Reconnect large areas of enhanced nature	
<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>Significant (but largely unquantified) benefits of integrating native vegetation into complementary SIRLWMP activities include:</p> <ul style="list-style-type: none"> — drain design — whole farm plan design — water for the environment flows (especially for streambank vegetation and specific wetlands; see below and the waterways section). 	<p>Biodiversity Response Planning (BRP) and National Landcare Program (Regional Land Partnerships) projects continue to be implemented: Linking Lower Goulburn, Ribbons of Blue, Sashes of Green (Ironbark) and Grey Box project incentives deliver native vegetation works of over 1,262 hectares.</p> <p>In 2020-21 a number of covenants were initiated and will be finalised in 2021-22.</p> <p>Engagement with Traditional Owners to implement onground works at many sites, including a 250 hectare property near Barmah.</p>
Priority: Balance water availability for all uses	
<i>Water for the environment</i>	
<p>Goulburn Broken CMA continued working with delivery partners to maximise environmental benefits of operational deliveries, such as using inter-valley transfers (IVT) to meet lower Broken Creek environmental flow objectives.</p> <p>Seasonal water proposals were prepared for each of the six years (from 2015-16 to 2020-21).</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>Eight SIR wetlands now receive environmental water (up from seven; see table on page 43). Key SIR wetland achievements include:</p> <ul style="list-style-type: none"> — delivery of environmental water to Kanyapella Basin for the first time — Barmah-Millewa Forest and Gaynor Swamp received environmental water. Due to good winter rainfall many wetlands across the catchment filled naturally — three private wetlands received water managed by the Murray-Darling Wetlands Working Group — environmental water was delivered down the upper Broken Creek, lower Broken Creek, Broken River and Goulburn River. <p>Total amount of environmental water delivered in 2020-21 was about 250 gigalitres plus an additional IVT volume of around 250 gigalitres.</p> <p>Lower Goulburn River and lower Broken Creek inter-valley transfer impacts were monitored and responses pursued. See also Waterways section for details.</p> <p>Goulburn Broken CMA continued to influence processes around rehabilitating legacy and abandoned quarries.</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 reports generated at the basin and state 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. The Farm Water Program was completed in 2018 and finalised in 2020.</p>	<p>Interest in groundwater use and management has remained strong throughout 2020-21 as landowners continue to consider how new and existing groundwater sources can be best utilised within their irrigation systems. AgVic extension staff continue to provide support to irrigators around the use and risks of using groundwater resources.</p> <p>The Northern Victoria Irrigation Development Guidelines have been updated and approved by GB CMA, NCCMA and NECMA.</p> <p>Useful water information links were added to the Sustainable Irrigation Program part of the Goulburn Broken CMA website.</p> <p>Updated information around water yields for the Goulburn Broken catchment is being considered.</p>

Long-term strategy implementation progress	2020-21 performance
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Priority: Build stewardship, incorporating local action and ideas	
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<p>SIR farmers and irrigation-dependent industries have responded to challenges by continually innovating and diversifying. Agricultural productivity has increased significantly 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 led the development of five-year Business plans for the six Aboriginal businesses along the Murray Corridor. Detailed work is being undertaken within the Goulburn Broken catchment with the Rumbalara Aboriginal Cooperative</p> <p>A soils discussion group has been supported by the NLP/RLP From the Ground Up project.</p> <p>The Goulburn Murray Resilience Strategy was completed in June 2020 and is a response to the macro drivers of change that are impacting on the GMID – both positive and challenging.</p> <p>Two highly successful employment programs delivered significant onground works throughout the Goulburn Broken catchment and GMID (GMID Drought Employment Program and Working for Victoria). These programs also provided employment and training opportunities for over 90 people. Many of the participants have since found jobs (sometimes in surprisingly different areas), but there is certainly a demand for this type of activity.</p>
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Priority: Adapt by understanding change and impact	
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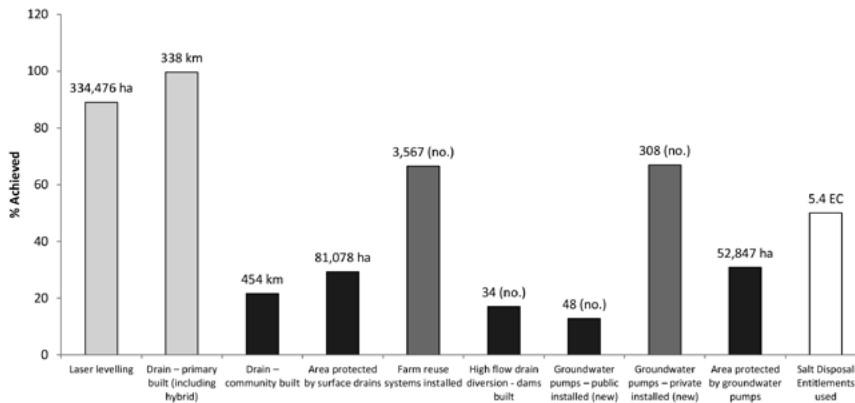
<p>The adaptive process in place since the 1990 SIRLWMP continues to be strengthened by more explicitly linking the long-term condition outcomes sought to the annual workplans through the annual critical attributes risk assessment. SIRPPIC is involved in this process.</p> <p>The use of land and water 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 Farm and Environment Working Group also held several solid discussions around the thresholds for the SIRLWMP's farm and regional viability critical attribute.</p> <p>Data collection for 2019-20 GMID Regional Irrigated Land and Water Use Mapping was completed. Analysis of the data was underway.</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. The Taskforce Committee was finally established in June 2021 and will now focus on the priorities moving into the future from a resilience perspective and the five key interventions.</p>
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Priority: Match drainage to meet changed needs, aligning it with modernised irrigation delivery	
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<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 2020 target of 103,000 hectares in the SIR's priority sub-catchments needing drainage, 73,611 hectares of farm, community and regional surface and sub-surface drainage networks have been protected (see figure page 71).</p> <p>Works achieved through the SIRLWMP to 2020 include: 737 kilometres of drains built, 3,567 irrigation reuse systems installed, 356 groundwater pumps installed, and 330,801 hectares of land laser levelled. A salinity-risk website launched in 2018 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 delivered:</p> <ul style="list-style-type: none"> – Upper Deakin DCD obstruction removal works program is now 100 per cent complete – Guilfus-Congupna DCD was approved, and obstruction removal works are 100 per cent complete – SIR DCD implementation guidelines were finalised – landowner engagement, modelling and development of proposed Murray Valley West DCD proposal well advanced – an economic assessment and a funding proposal were developed for a hybrid Waranga Drain and Pump project – 55 kilometre of drains built protecting an additional area of 7,467 hectares. <p>Development of the draft GMID Drainage Management Strategy was completed for DELWP internal review and endorsement (before wider public consultation).</p>
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Long-term strategy implementation progress	2020-21 performance
Priority: Match drainage to meet changed needs, aligning it with modernised irrigation delivery (continued)	
<p>Groundwater resources in the Goulburn Broken Catchment are managed by GMW, supported by partner agencies.</p> <p>969 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>The second stage of public groundwater pump disposal realignment works was completed, with the remaining 15 realigned pumps handed over to GMW operations.</p> <p>All Murray Valley Irrigation Area public groundwater pumps were successfully deactivated, and four of the five Shepparton Irrigation Area pumps were also deactivated. Public pump deactivation is progressing well in Central Goulburn Irrigation Area.</p> <p>New public pump local operating and receiving water triggers were endorsed, and the development of a new Power BI based integrated management system (IMS) to support the pump network's future operating is in development</p> <p>SIR monitoring bore network: Additional observation bores were identified around newly deactivated pumps to monitor changing watertable risk.</p> <p>A workplan structure and approach was completed for the next SIRLWMP five-year review project.</p> <p>Drain water quality monitoring has continued.</p>
Priority: Maintain partnerships and good governance	
<p>The community-based SIRPPIC includes skills, geographic and industry-based representatives from the local community, GB CMA, GMW, AgVic, DELWP, GMLN and Murray Dairy.</p> <p>The Municipal Catchment Coordinator Reference Group is in its 28th 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 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 reinvigorated by collaborative drainage initiatives.</p>	<p>Goulburn Broken CMA continued supporting SIRPPIC, Farm and Environment and SIR Drainage working groups. Farm and Environment Working Group celebrated its 100th meeting (quarterly meetings). Meetings continued where possible as virtual meetings, and the community and agencies worked collaboratively to make this a possibility, to maintain partnerships and community engagement.</p> <p>SIRPPIC completed their 2020 Performance Evaluation.</p> <p>The Sustainable Irrigation Region Senior Combined Partners meeting continued to provide a great opportunity for integration and collaboration.</p> <p>The development 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 will lead 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"> — RiverConnect — groundwater management and monitoring — Follow the Flowers — water quality partnerships — two employment programs — GMID land and water use mapping project — Municipal Catchment Coordinator reference group (with Moira, Campaspe and Greater Shepparton municipalities). <p>Goulburn Broken CMA's Municipal Catchment Coordinator:</p> <ul style="list-style-type: none"> — coordinated the development of the Earthworks Planning Amendment with the MCC Reference Group which is currently awaiting Ministerial approval — represented the Goulburn Broken CMA on the Goulburn Broken Greenhouse Alliance (recently changed name to Goulburn Murray Climate Alliance) — convened the Goulburn Broken Local Government Biodiversity Reference Group, which consists of all Councils in the Catchment, DELWP and the CFA.

SIR Land and Water Management Plan's 1990-2021 target achieved, %ⁱ
 (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.

Actions 2018-19, 2019-20 and 2020-21 (Shepparton Irrigation Region only, incl. Rochester)

Action ⁱ		From funds received				% achieved
		Achieved			Target ⁱⁱ	
		2018-19	2019-20	2020-21	2020-21	
Surface water action^{iii, viii}						
Laser levelling ^{iv}	ha	2,538	7,580	3,676	683	539
Drain – primary built (including hybrid) ^v	km	32.0	17.0	55.0	-	
Drain – community built	km	4.6	-	-	-	
Area protected by surface drains ^{vi}	ha	4,330	4,300	7,467	-	
Farm reuse systems installed ^{vii}	no.	-	-	-	-	
Farm reuse systems installed ^{vii}	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 ^{ix}	ha	2,538	7,790	4,947	-	
Salt disposal entitlements used (SDE)	EC	1.4	5.4	5.4	10.8	50
Planning for works action						
Whole farm plans - new	no.	30	61	25	15 ^x	407
Whole farm plans - modernised	no.	31	56	36		
Whole farm plans - new	ha	1,718	6,200	3,057	-	
Whole farm plans - modernised	ha	3,357	8,959	4,294		

- i. 'Action' includes actions and outcomes. 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 58.
- 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, 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.
- iv. Assumptions: Assumption change from 2018-19 is 50 (not 60) per cent of area put under whole farm plans. Target = 50 per cent of area to be put under whole farm plans [For 1990-20 = 0.5 x no. (131) 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. Assumption: Area protected = Length of drain (km) x 104. Areas actually measured: 2018-19 Muckatah 2/3P CSWMS 630, Upper Deakin DCD 3,700; 2019-20 Cornella Creek Catchment DCD: 4,300.
- 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. Some actions not implemented for at least three years but which remain possible in future are not shown: High flow drain diversion (no. dams built and volume high nutrient water removed); Farm delivery channel upgrade (length); Groundwater pumps installed (new: no. & area of public & private); Water pumped (volume increased); Groundwater pump protection (area); Tile drains installed (area).
- ix. 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 hectares of soil moisture monitoring and 2020-21 included 1,033ha.
- x. Combined target for the number of new and modernised whole farm plans.

What's next?

Communities and partnerships

The SIR community has risen to the challenges presented in 2020-21 and has been adapting, responding and potentially transforming the way we do things.

The SIRLWMP 30-year achievement summary outlines how important community driven action is as well as a long-term focus, action and trust between all the partners. During 2021-22 the scene is set to update the SIRLWMP, and it is hoped that governments continue to recognise the immense value community-driven action delivers. High levels of trust will be more critical than ever in updating and implementing the SIRLWMP. Major actions in 2021-22 planned are:

- start the renewal of the 30-year SIRLWMP building on the resilience approach already underway
- implement the Goulburn Murray Resilience Strategy
- continue to strengthen relationships and work with indigenous groups
- support and contribute to the proposed Murray-Darling Basin Cooperative Research Centre
- review the engagement and communications plan to adapt to new opportunities and ways of doing things.

Water availability

Coordination and Works

- continue advocating the region's perspective in state and Murray-Darling Basin water sphere, such as the need for:
 - improving water efficiency on farms and
 - balanced and fair water sharing
- support indigenous-led involvement in water management
- provide farmers and agribusinesses with opportunities to optimise water availability (via the ARC project below).

Investigations and Information

- improve community understanding and access to water information to help decision-making
- provide input into monitoring of new operational rules for the Goulburn River
- continue to review the 880 gigalitres threshold of the water for agriculture critical attribute (including impacts from climate change)
- improve understanding of ecological responses to environmental watering
- continue investigating the damage from inter-valley transfers of water to the Goulburn River and lower Broken Creek
- support and integrate the myriad of drought resilience programs that are now becoming available across the landscape
- proactively pursue the next iteration in water efficient systems or the greater productivity capacity of new systems
- investigate the alignment with the opportunity from land that is now less irrigated and may benefit from incentives with carbon, renewables or nature covenants.

Watertables and water quality

Coordination and Works

- continue to roll out DCD-based hybrid drainage system projects: the Murray Valley West DCD and Waranga Drain and Pump project.
- monitor newly drilled observation bores around the perimeter of Gaynor Swamp, assess and report watertable and salinity impacts of environmental watering events
- 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 and with regional partner agencies.

Investigations and Information

- create and adapt programs that respond to changing needs and risks by:
 - storing and making accessible the vast knowledge about watertables, catchment hydrology and hydrogeology,
 - finalising technical, policy and planning inputs to deliver the final stage of the public groundwater pump rationalisation project (i.e. Central Goulburn Irrigation Area) and
 - develop work brief and scope project to assess long-term deactivation options for Girgarre Evaporation Basin (including deactivation trial options)
- finalise and implement 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 and cultural benefits
- continue developing ways to improve on-farm and off-farm drainage
- continue and enhance water table and water quality monitoring to inform program delivery and regional obligations
- contribute to MDBA's Basin Salinity Management Strategy
- review water quality targets and management response.

Native vegetation extent

- improve integration of native vegetation into delivery of the whole farm plan incentive scheme
- target onground works through the Linking Lower Goulburn project following additional 6 months funding for this project
- continue to advocate for the need for a Goulburn Broken Biodiversity Fund
- continue advocating for improvements to Native Vegetation Regulations
- continue facilitating partnerships and funding opportunities to discuss increasing native vegetation extent in the SIR
- seek opportunities for improving understanding of native vegetation extent across the region
- ensure Goulburn River health (including streambanks) is 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 share the importance and learnings from the Land and Water Use Mapping for the GMID for 2019-20 and value add project opportunities
- continue to respond to increased interest in groundwater use
- assist irrigators involved with the GMW Water Efficiency Project (WEP) to make informed decisions through whole farm planning
- source funding to extend the employment programs
- develop a prospectus for the region that describes the opportunities, water, soil, people and the environment.

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.

Human resources (including occupational health and safety)

Compiled by: Kate Montgomery, Caitlin Baker and Mary Dimit.

Long-term and annual scorecard

2020-21 performance	On target			
Organisation condition ⁱ	1990	2021	Long-term risk	Long-term strategic implementation
	n.a.		LOW	Late

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

Government investment ⁱ, \$000

2018-19	2019-20	2020-21	2021-22 ⁱⁱ
5,598	5,995	6,108	6,600

- i. Excludes board and support committees. These are costs rather than investments. Costs are embedded within other investment areas.
 ii. Forecast is based on the Corporate Plan 2021-22.

Major strategic references

The Goulburn Broken Workforce Strategy 2013-18 integrates direction and guidance from legislation, policies, strategies and plans at international, national, state, regional and local levels. Appendix 5 includes a more complete list.

Background

Goulburn Broken CMA fosters a workforce that is committed to leadership, professionalism, industry leading expertise, and respect for our colleagues, community and environment with a continued focus on improvement.

Our culture represents these values through the sustained commitment to developing and investing in our people, encouraging innovation and adaptability to respond to opportunities as they present. This enables agility for the organisation, our employees in the broader workforce, and supports the achievement of their professional development goals.

Goulburn Broken CMA demonstrates a holistic commitment to providing a healthy workplace and practically supports injury prevention through proactive initiatives and maintaining a focus on both the physical and mental wellbeing of our people and partners. Goulburn Broken CMA continues to invest in providing a modern work environment and flexibility to meet the diverse demographics of our contemporary workforce.

We have continued to align our workforce capabilities and design to support the achievement of the Regional Catchment Strategy's vision and provide meaningful outcomes for our people, the community and the environment.

Organisation condition

The People Matter Survey 2020 benchmarked results demonstrated that the Goulburn Broken CMA remains a sector leader exceeding comparator organisations in a range of areas including Engagement, Meaningful Work and Appropriate Workload. These results were achieved whilst experiencing a pandemic and managing a rapidly changing work environment as a result of this – 93 per cent of respondents to the survey indicated they had received sufficient information on changes due to COVID-19.

Key employee data continues to indicate a healthy workforce despite the economic impacts across the world from COVID-19. Goulburn Broken CMA was able to offer seven Higher Duties/Acting opportunities throughout the year, absenteeism continued to remain low, 75 per cent of the workforce has been with the organisation greater than five years and there was no voluntary turnover for the year.

Workforce data for the current and previous financial years is contained in the tables on pages 82 and 83.

Long-term strategy implementation progress

Human Resources

The Goulburn Broken CMA Workforce Strategy 2013-18 directs strategic priority projects and opportunities for enhancing the Goulburn Broken CMA employment value proposition. The current strategy has now reached its planned completion date and was intended to be renewed this year but was delayed due to the COVID-19 response. The renewal of this strategy will be a focus for 2021-22.

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 continued to review and update the OHS risk register and controls, Safe Work Instructions and have done so via communication and engagement with the staff body. This year an annual work plan was introduced to guide the work of the OHS Committee.

2020-21 Human resources performance

The 2020-21 year saw significant work to support employees and the organisation through the COVID-19 pandemic whilst continuing to focus on effective delivery and updates to existing human resource operations. The COVID-19 response required significant resources to manage the working arrangements, conditions and wellbeing of employees as we experienced lockdowns, remote schooling and changes to how we could work.

Key activities undertaken to deliver against the core strategic Workforce Strategy objectives are described below.

Governance

The Goulburn Broken CMA Enterprise Bargaining Agreement was finalised this year under a new wages policy. The approach was again well supported by staff with an active bargaining committee supporting the process.

The Goulburn Broken CMA flexible work framework was implemented this year with the support of an employee led committee. This has resulted in a new approach to support all employees considering how they may work in the future. The committee will continue to look for opportunities to build skills and knowledge to support flexible work practices across the Goulburn Broken CMA.

This year we finalised and implemented a new payroll and employee system via D365 and PayFocus. This was a significant project to design, test and implement and has resulted in a streamlined integration process for finance and payroll. Further optimisation for training records management will be investigated in the coming year.

Attraction and recruitment and labour supply and agility

There was little position change with no new employees and one departing employee due to the end of a fixed-term project. However, the organisation was still able to provide internal career development opportunities by offering higher duties and acting assignments to employees. Goulburn Broken CMA was successful in attracting funding both under the Drought Employment Program and Working For Victoria tranches that enabled a casual workforce of 71 locals to be engaged via a Labour Hire organisation. This was a significant project that saw collaboration from many teams across the organisation including People, Safety and Wellbeing to provide recruitment and human resource management support.

Capability building

Goulburn Broken CMA has continued to provide good quality and diverse learning and development experiences for employees. In 2020-21 47 employees participated across nine formal knowledge sharing sessions delivered by employees for their peers. Topics for these sessions included: the Protective Marking Scheme, Goulburn Murray Trade Rule Review and People Matter Survey Data summary. Employees also completed part of their First Aid training via an online module and will complete the practical

assessment to finalise this training as COVID-19 restrictions ease as well as a review of the Project OHS Management procedure.

Participation and motivation

Goulburn Broken CMA has continued to support workplace flexibility, and this continues to be a highly valued attribute by staff with 58 per cent of staff having formalised flexible arrangements this year. The organisation continued to support employees balance work and life demands including continuing to support three parents return to work from parental leave, and five staff access long service leave. During the pandemic special leave was introduced to support employees at high risk of contracting the virus, those home schooling and to take a break.

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 Gaye Sutherland and Laura Binks (scholarship recipient) completing in 2020 and Caitlin Baker commencing in 2021. Support continued for staff to contribute to the community through a variety of projects including via the Greater Shepparton Lighthouse however due to COVID-19 participation did temporarily decline.

One work experience placement was provided by the Goulburn Broken CMA this year and was undertaken remotely due to COVID-19.

Diversity and inclusion

2020-21 saw year three of implementation for the Goulburn Broken CMA's Diversity and Inclusion Plan.

Initiatives completed this year were aimed at helping us improve our understanding of diversity, diversity in our workplace and enhancing our communication to embrace diversity. See table below.

Our staff

A list of all Goulburn Broken CMA staff employed for all or part of 2020-21 is on page 160.

Diversity and Inclusion Action Plan 2017-2022

Strategic Priority	# actions	% completed
Use an 'equity lens' in the review of all policy and procedures.	9	60
Continue to strive to achieve gender equity in our recruitment, succession planning and professional development opportunities.	18	62
Build our capacity to be inclusive of cultural diversity.	4	57
Maintain, strengthen and support talented Indigenous staff and Indigenous partnerships.	9	100
Ensure that our workplace is accessible and adaptable to support current and future employees with disabilities.	2	50
Achieve a communication standard that uses inclusive language that is respectful of LGBTI people in the workplace.	4	100
Provide a workplace that supports people entering, developing, enhancing and exiting their career journey.	16	67

Annualised salary by \$20,000 bands for executives and other senior non-executive staff

Income band (salary) ⁱ	No. (headcount)
< \$160,000	4
\$160,000 - \$179,999	1
\$180,000 - \$199,999	0
\$200,000 - \$219,999	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 2018-19, 2019-20 and 2020-21

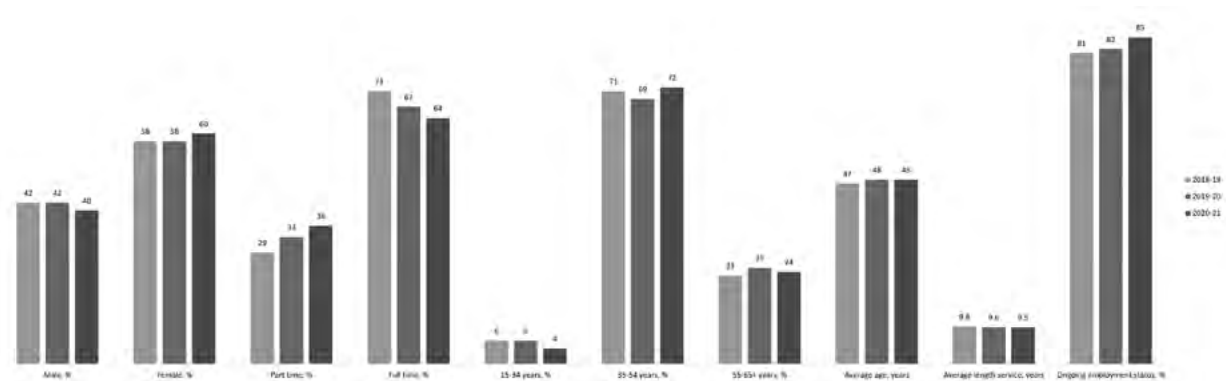
	2018-19		2019-20		2020-21		Comments
	no.	%	no.	%	no.	%	
Years of service ⁱ							
12 months or less	3	5	6	11	0	0	While no new employees joined us this year we saw a number of staff complete 5 years of service.
1-3 years	5	10	3	5	8	15	
3-5 years	5	10	7	13	5	9	
5+ years	39	75	39	71	40	75	
Average length of service, years	9.8		9.6		9.5		
Salary distribution ^{i & ii}							
<\$40,000	0	0	0	0	0	0	Salary figures have continued to climb driven by the annual EBA and PEERS increments.
\$40,000 - 59,999	0	0	0	0	0	0	
\$60,000 - 79,999	17	33	17	31	13	25	
\$80,000 - 99,999	18	35	20	36	18	34	
\$100,000+	17	32	18	32	22	41	
Average Salary ⁱⁱⁱ	\$87,680		\$92,650		\$82,247		
Qualifications ⁱ							
Year 12 or less	3	6	3	5	2	4	
Certificate	0	0	0	0	0	0	
Advanced Diploma/Diploma	8	15	9	16	8	15	
Degree	33	63	34	63	33	62	
Postgraduate Degree/Graduate Diploma	8	15	9	16	10	18	
Turnover (total)	6	12	4	7	1	2	Turnover was very low this year – given the current COVID-19 environment this is encouraging.
Turnover (ongoing staff only, % of total turnover)	4	67	2	50	0	0	
Exit interviews completed	1	17	2	50	1	100	
Absenteeism		1.7		1.4		1.4	
Training expenditure (% of employee related expenditure)	\$52,415	0.9	\$57,625	1.0	\$91,872	1.5	

i. All employees (excluding terminations and Board/committee members).

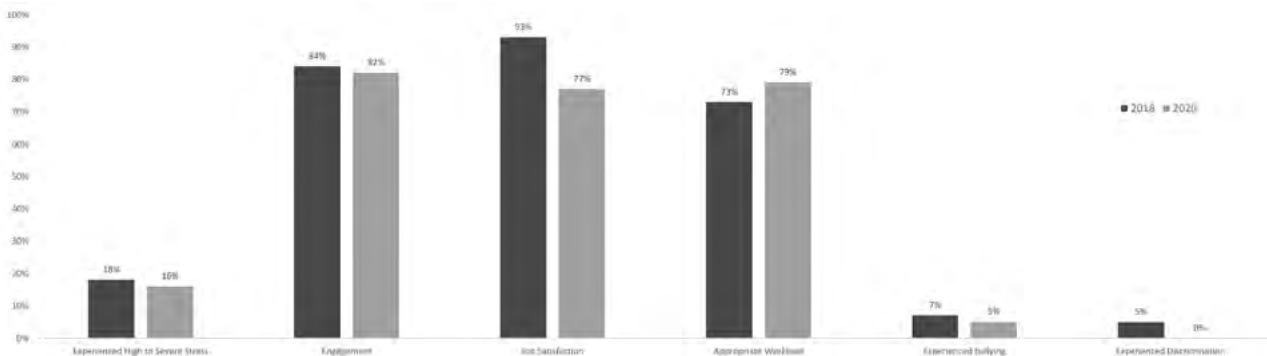
ii. Based on 1.0 FTE full year salary.

iii. Actual average salary paid including terminations.

Goulburn Broken CMA people profile



People Matter survey results 2020



Comparative workforce data ^{i, ii}

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 (2021) and in the last full pay period in June of the previous reporting period (2020).

	June 2021										June 2020								
	All employees			Ongoing ⁱⁱⁱ			Fixed term ^{iv} and casual			All employees			Full time		Ongoing ⁱⁱⁱ		Fixed term ^{iv} and casual		
	No. (headcount)	FTE	No. (headcount)	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE	No. (headcount)	FTE
Demographic data																			
Gender																			
Male	21	20.4	15	2	16.4	4	4.0	23	22.2	16	2	17.4	5	4.8					
Female	32	27.6	13	15	24.0	4	3.6	32	27.6	15	12	23.5	5	4.1					
Age																			
15-24	0	0.0	0	0	0.0	0	0.0	0	0.0	0	0	0.0	0	0.0					
25-34	2	1.8	1	1	1.8	0	0.0	3	2.3	1	2	2.3	0	0.0					
35-44	15	13.2	8	6	12.4	1	0.8	16	14.1	9	6	13.3	1	0.8					
45-54	23	20.3	12	8	17.5	3	2.8	22	19.9	13	5	16.5	4	3.4					
55-64	13	12.7	7	2	8.7	4	4.0	14	13.5	8	1	8.8	5	4.7					
65+	0	0.0	0	0	0.0	0	0.0	0	0.0	0	0	0.0	0	0.0					
Classification data ^v																			
Bands																			
Band 5	2	2.0	2	0	2.0	0	0.0	2	2.0	2	0	2.0	0	0.0					
Band 6	5	4.6	3	2	4.6	0	0.0	6	5.8	5	1	5.8	0	0.0					
Band 7	13	11.4	7	5	10.6	1	0.8	13	11.4	8	3	10.1	2	1.3					
Band 8	15	12.5	6	8	11.7	1	0.8	16	13.1	6	8	11.5	2	1.6					
SEO	12	11.5	10	2	11.5	0	0.0	12	11.5	10	2	11.5	0	0.0					
Program managers	5	5.0	0	0	0.0	5	5.0	6	6.0	0	0	0.0	6	6.0					
PEER	1	1.0	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. Employees are classified as a Band (1 to SEO) under the EBA. Senior managers refers to staff not employed under the EBA.

2020-21 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 2020-21 focus has been largely on the Occupational Health and Safety systems for our field works with the introduction of casual work crews. This has seen a proactive review of risk assessments and supporting safe work procedures to ensure currency. Incident and hazard reporting data was also monitored and reported on to identify trends and respond.

Further OHS achievements this year include the external audit of our OHS systems with the resulting finding that the OHS approach of the CMA is adequate with no high risk items identified as part of the audit and noted in the positive findings that 'a positive OHS culture was evident'. In addition this year a project was undertaken to optimise our iAuditor system which resulted in a license being

provided to all staff, key staff trained to better utilise the system functions and the commencement of a review of all templates to embrace the functionality and improve user experience. A project for the year ahead will be to improve OHS reporting as a result of this improved system.

This year saw of the following wellbeing initiatives offered including:

- flu immunisations, taken up by 43 per cent of employees
- social engagement activities such as A Taste of Harmony, virtual couch catch up.

The Key Performance Indicators for OHS at the Goulburn Broken CMA continue to be included in the quarterly reporting of OHS to the Board and Senior Management team.

Refer also to the 2020-21 Occupational Health and Safety performance table on page 85.

What's next?

Human resources

- Embedding of the Flexible Work Framework.
- Implementation of the *Gender Equality Act 2020*.
- Renewal of the Goulburn Broken CMA Workforce Strategy.

Occupational Health and Safety

- Continued implementation of the VPS Leading the Way OHS Framework.
- Improved reporting of OHS data via iAuditor.
- Progress towards an OHS Annual Plan.

Occupational health and safety statistics summary

Measure	KPI	2018-19	2019-20	2020-21
Hazards	Hazards reported, no.	6	4	2
	Rate per 100 FTE	12	8	4
Incidents	Total incidents, no.	11	9	6
	Rate per 100 FTE	23	18	12
	Incidents requiring first aid and/or further medical treatment, no.	4	1	0
Claims	No. of Standard claims	0	0	0
	Rate per 100 FTE	0	0	0
	No. of lost time Standard claims	0	0	0
	Rate per 100 FTE	0	0	0
	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	0
Return to work	Percentage of claims with RTW plan <30 days	0	0	0
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	4	5
Risk management	Percentage of internal audits/inspections conducted as planned.	79	50	75
	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	82	50	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)	0	1	1	
- reporting of incidents and injuries	100	100	100	

Environmental footprint

Long-term and annual scorecard

2020-21 performance	On target			
Organisation condition ⁱ	1990	2021	Long-term risk	Long-term strategic implementation
	●	●	MEDIUM	Early

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

Government investment, \$000

2018-19	2019-20	2020-21	2021-22 ⁱ
0	0	0	0

i. Forecast is based on the Corporate Plan 2021-22.

Major strategic references

Appendix 5 includes a list of relevant state, national and international strategies.

Background

With support from management and staff, the 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 24D and in line with current carbon accounting practices.

Organisation condition

The table on page 87 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.

2020-21 performance

Total emissions fell again during 2020-21, primarily the result of reduced travel and staff working from home due to Coronavirus (COVID-19). Total greenhouse gas emissions for the year were 55 per cent below 2006-07 levels. Emissions per FTE fell to 5.7 t CO₂e (down from 9.3 in 2018-19) and were almost half the 2006-07 levels. Overall, the Authority continued to meet its target of 20 per cent below 2006-07 levels of total emissions.

Electricity emissions were 47 per cent below 2006-07 levels, with lower consumption during 2020-21 due to staff working from home.

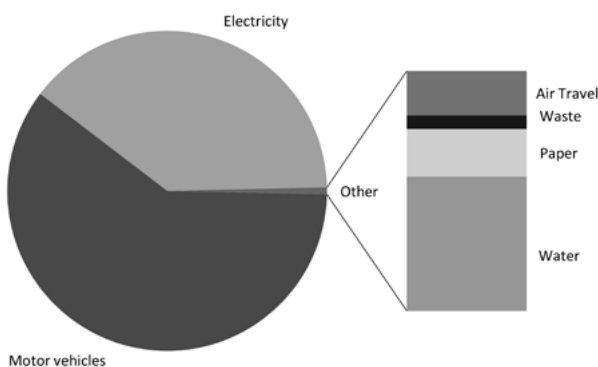
Vehicle fleet emissions continued the downward trend. Some of this was a result of reduced travel due to staff working from home. The ongoing management decision to preference hybrid/petrol vehicles over diesel vehicles where practical combined with improved fuel efficiency was also a contributing factor. This combined with ongoing improvements in the vehicle fleet including fuel efficient, lower emissions vehicles resulted in significantly lower emissions per 1,000 kilometres compared to previous years. Total emissions from vehicles were 58 per cent below 2006-07 levels.

Paper use fell to just over 2.5 A4 equivalent reams per FTE, which was 82 per cent below the 2006-07 level of 14.2 reams per FTE.

Flight emissions were almost zero with very little air travel due to COVID-19.

Water and waste emissions remain a very small component of the overall emissions. Due to COVID-19, the annual waste audits were not undertaken for 2019-20 and 2020-21. Since waste and recycling data was unavailable, data averages per FTE from the 2018-19 year were used with a reduction in office days due to staff working from home.

2020-21 Emissions by source activity

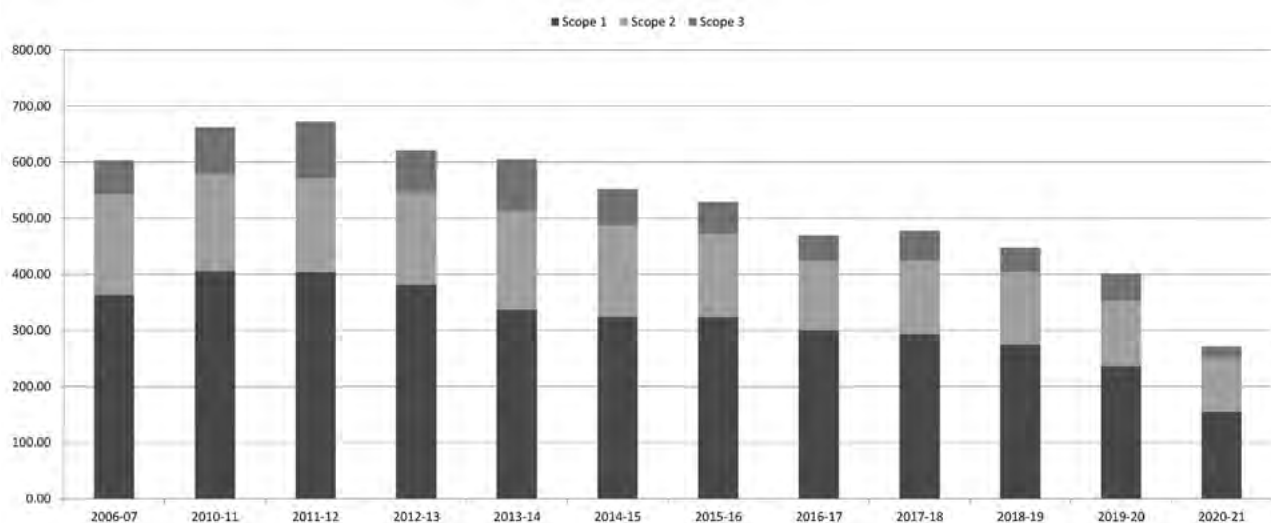


Office-based environmental impacts reporting

Sustainability report	2006-07 (base year)		2019-20		2020-21	
	Consumption	GHG emissions (t CO ₂ -e)	Consumption	GHG emissions (t CO ₂ -e)	Consumption	GHG emissions (t CO ₂ -e)
Direct emissions (Scope 1)						
Petrol for vehicles (L)	74,711	171	17,996	42	23,686	55
Diesel for vehicles (L)	66,127	178	71,538	195	36,855	100
LPG for vehicles (L)	8,936	14	-	-	-	-
Distance travelled by fleet vehicles (km)	Not avail.		1,195,263		1,040,332	
Total Scope 1		363		237		155
Indirect emissions (Scope 2)						
Electricity (kilowatt hour)	147,930	179	113,915	116	98,751	97
Total Scope 2		179		116		97
Optional emissions (Scope 3)ⁱ						
Electricity (transmission & distribution losses) (kWh)	147,930	22	113,915	12	98,751	10
Flights (km)	Not avail.	-	93,656	24	938	0
Waste - landfill (kg)	8,680	9	144	0	129	0
Water consumption (kL)	Not avail.	-	512	1	459	1
Paper consumption (reams)	514	2	295	1	100	0
Petrol (extraction, production, etc.) (L)	74,711	14	17,996	2	23,686	3
Diesel (extraction, production, etc.) (L)	66,127	13	71,538	10	36,855	5
LPG (extraction, production, etc.) (L)	8,936	1	-	-	-	-
Total Scope 3		61		49		20
Total Scope 1 + 2		542		353		252
Total Scope 1 + 2 + 3		603		402		272
Offsets purchased (% air travel)	Not avail.	-		0		0

i. Scope 3 emissions are indirect emissions, such as extraction and production of fuels, transport related activities in vehicles not owned or controlled by the 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.

Goulburn Broken CMA emissions - t CO₂-e



Governance

Compiled by Eileen Curtis, Shannon Crawford and Kate Brunt.

Long-term and annual scorecard

2020-21 performance	On target			
Organisation condition ⁱ	1990	2021	Long-term risk	Long-term strategic implementation
	n.a.		MEDIUM	Watch & adapt

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

Government investment ⁱⁱ, \$000

2018-19	2019-20	2020-21	2021-22 ⁱ
1,422	1,566	1,488	1,463

i. Forecast is based on the Corporate Plan 2021-22.

ii. The approach to calculating Governance was revised in 2020-21 and prior years were recalculated for consistency.

Major strategic references

The Goulburn Broken Corporate Plan 2020-21 to 2024-25 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 5 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 the 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 the 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 the 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.
- 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 the Goulburn Broken CMA maintains its social licence to operate.

2020-21 performance

The performance of the Governance investment area is described comprehensively though the Business and Financial Report sections.

What's next?

Key areas of the focus for business improvement in 2021-22 will be:

- Continued development of reporting within shared business systems in collaboration with 7 other CMAs to support ongoing realisation of benefits from implementation of new systems.
- Ongoing shared knowledge and resources across CMAs and wider water sector to respond efficiently and effectively to increasing governance requirements with limited resources.
- Development of Gender Equality Action Plan and implementation of actions identified.
- Further enhancement of Project Management systems to support efficiency and accuracy in spatial mapping and reporting
- Training across business on updated procurement and risk frameworks including application of Social

Procurement strategy.

- Continued implementation of actions identified in Protective Data Security Plan.
- Update of information management framework to take into account hybrid working environments and system enhancements.

Goulburn Broken CMA's legislative and funding context

Refer to 'Objectives, functions, powers and duties' below for the legislative context.

The Victorian Government funds the Goulburn Broken CMA to fulfil its statutory obligations as detailed in the two relevant Statements of Obligations.

Costs that enable the 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.

Goulburn Broken CMA's funding of \$15 million was sourced from Regional, Victorian and Australian Government sources in 2020-21. It is estimated that the regional community contributes (in-kind and via products and services) about the same that governments contribute.

An increasing amount of government funding received is from initiative funding sources.

All works undertaken are in line with State, Murray-Darling Basin and National strategies.

Objectives, functions, powers and duties of the Goulburn Broken CMA

Goulburn Broken CMA has responsibilities under two Statements of Obligations, one under the *Catchment and Land Protection Act* (for obligations under that Act) and another under the *Water Act* (for obligations under that Act). The statements are available under About Us on the Goulburn Broken CMA website www.gbcma.vic.gov.au

Catchment and Land Protection (CaLP) Act 1994

The responsibilities of the 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*, the 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

Planning Framework

The Goulburn Broken CMA's planning framework is described within the 'Regional Catchment Strategy, resilience and climate change' section on page 20.

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 Deficiencies with respect to the applicable Standing Directions under the *Financial Management Act 1994* and Instructions.



Helen Reynolds

Chair

23 September 2020

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, the Goulburn Broken CMA develops detailed environmental management strategies under the umbrella of the overarching Regional Catchment Strategy.



Helen Reynolds, Chair - For the past 17 years Helen has owned and managed a farming business at Congupna with her partner Craig. The business produces a wide range of irrigated fodder, grains and small seeds and does contracting work and grain drying for other farms. Helen has an interest in sustainable and profitable private land use and effective management of public land. Helen believes the greatest challenge facing the Catchment is the disconnection of people's lives from nature and food production while the greatest opportunity is the chance to use water specifically for environmental benefits. She also believes one of our biggest advantages is our location and the innovative and committed people in the community and involved in agriculture that enrich our catchment.



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.



Sarah Parker - Sarah holds a Master of Agriculture and Rural Development and has completed the Australian Institute of Company Directors course. She has experience in executive and management roles in agriculture, extension and research and community development and education. Sarah has been a partner in an irrigated dairy farm near Undera since 2004. She is involved in Australian Women in Agriculture, National Rural Women's Coalition, Australian Dairy Collective (milk supply group) and the Victorian Farmers Federation. Sarah is passionate about sustainable future for agriculture and the environment, enjoys working with a variety of stakeholders and is keen to see the next generation become more involved in natural resource management.



Jan Boynton - Jan was a senior executive in both Local Government and State Government and was the inaugural CEO of the North Central CMA. She is an experienced Non-Executive Director and is currently Chair – Lifeline Central Victoria & Mallee, and on the Boards of CVGT Australia; Bendigo Art Gallery; Bendigo Jockey Club and Haven; Home, Safe. She holds a Bachelor of Town and Regional Planning and is a Fellow of the Australian Institute of Company Directors. Jan runs a cattle stud and cereal crop and grain business with her partner.



Sam Lolicato - Sam grows apples, walnuts and fodder crops and has experience producing grains and livestock. He has postgraduate qualifications in agricultural science, teaching, climate change and public administration and has supported all the main agricultural industries with research and extension. He applies a forward-looking resilience approach to achieve social, environmental and economic outcomes for current and future generations.



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 an Indigenous Workforce Adviser at RMIT. She has extensive experience advocating for and building opportunities with women in business, including in environmental management and in tourism. Leanne is Chair of the Outback Academy, 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 and was elected as a North East Member of the First Peoples Assembly of Victoria.

Board members and meeting attendance 2020-21

Name	Position	Term	Attended	Eligible to attend
Helen Reynolds	Chair	1 July 2020 to 30 June 2021	11	11
Adrian Weston	Deputy chair	1 July 2020 to 30 June 2021	11	11
Ron Harris		1 July 2020 to 30 June 2021	11	11
Sam Lolicato		1 July 2020 to 30 June 2021	10	11
Jan Boynton		1 July 2020 to 30 June 2021	11	11
Sarah Parker		1 July 2020 to 30 June 2021	10	11
Leanne Miller		14 December 2020 to 30 June 2021	5	6

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 2020-21 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 the 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 2020-21, the committee met 5 times. Attendance of committee members is detailed in the table below.

Audit, Risk and Compliance Committee membership and meeting attendance 2020-21

Name	Position	Term	Attended	Eligible to attend
Adrian Weston	Chair, Independent	1 July 2020 to 30 June 2021	5	5
Helen Reynolds (ex officio)	Independent	1 July 2020 to 30 June 2021	5	5
Sarah Parker	Independent	1 July 2020 to 30 June 2021	4	5
Jan Boynton	Independent	23 July 2020 to 30 June 2021	4	4
Craig Marshall	CPA external appointee	1 July 2020 to 20 August 2020	2	2
Kerrie Howard	CPA external appointee	19 November 2020 to 30 June 2021	3	3

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 2020-21 are listed in the table below.

Remuneration Committee membership and meeting attendance 2020-21

Name	Position	Term	Attended	Eligible to attend
Ron Harris	Chair	1 July 2020 to 30 June 2021	3	3
Helen Reynolds (ex officio)		1 July 2020 to 30 June 2021	3	3
Sam Lolicato		1 July 2020 to 30 June 2021	3	3
Jan Boynton		1 July 2020 to 23 February 2021	2	2
Leanne Miller		23 February 2021 to 30 June 2021	0	1

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	2020-21 issues and status
<i>Catchment and Land Protection Act 1994</i>	Prepare, coordinate, monitor and review of Regional Catchment Strategy.	Regional Catchment Strategy for 2013-2019 was approved on 16 May 2013. Renewal of the 2021-27 RCS is underway and due to be submitted to the Minister in October.
	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.'	2019-20 Annual Report submitted on time and 2020-21 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 29 June 2021.
	Members declare new interests at each (monthly) board meeting and document it in Pecuniary Interests Register. New members must submit a primary return and other members an annual ordinary 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.	Copy is available for inspection during business hours at 168 Welsford Street, Shepparton and also available on our website at www.gbcma.vic.gov.au
	Review funds at each (monthly) board meeting. Policy for investment as per the Standing Directions 2018.	Cash and Liquidity positions and budget reviewed with Board quarterly.
	Submit statement of borrowings. Review borrowings at each (monthly) board meeting. Finance leases are borrowings and subject to Treasurer's approval.	Included as part of Corporate Plan. Finance leases are classified as borrowings due to the accounting treatment. Board reviews monthly.
	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, DELWP model policies and Code of conduct for public sector employees.
	Waterway management responsibilities.	Goulburn Broken CMA was established as a body corporate under the <i>Catchment and Land Protection Act 1994</i> and then established as an Authority under the <i>Water Act 1989</i> with delegated waterway management, floodplain management and drainage functions under Part 10 of the <i>Water Act 1989</i> .
<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 221 is available under the <i>Freedom of Information Act 1982</i> . See page 89 for Statement regarding level of compliance with Standing Direction.

Act or policy	Board's major tasks	2020-21 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><i>The 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). 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.</p> <p>The Act allows the 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 the Authority in-confidence.</p> <p>From 1 September 2017, the Act has been amended to reduce the Freedom of Information (FOI) processing time for requests received from 45 to 30 days. However, when external consultation is required under ss29, 29A, 31, 31A, 33, 34 or 35, the processing time automatically reverts to 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>Making a request:</p> <p>FoI requests can be lodged through a written request to the Goulburn Broken CMA's Freedom of Information officer, as detailed in s17 of the <i>Freedom of Information Act 1982</i>. An application fee of \$30.10 applies. Access charges may also be payable if the document pool is large, and the search for material, time consuming.</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 foi@gbcma.vic.gov.au or mailed to:</p> <p>Freedom of Information Officer PO Box 1752, Shepparton, Vic 3632.</p> <hr/> <p>FoI statistics/timeliness:</p> <p>During 2020-21, the Authority received 13 applications.</p> <p>Of these requests:</p> <ul style="list-style-type: none"> — nil were from Members of Parliament; — nil from the media; and — the remainder from the general public. <p>The Authority closed 4 FOI applications during the 12 months ended 30 June 2021.</p> <ul style="list-style-type: none"> — One FOI was completed within the statutory 30 days time period; — One within 46 to 90 days; and — Two were greater than 90 days, the remaining FOIs remain in progress. <p>During 2020-21, three requests were subject to a complaint/internal review by OVIC with nil progressing to VCAT.</p> <hr/> <p>Further information</p> <p>Further information regarding the operation and scope of FOI can be obtained from the Act; regulations made under the Act; and www.ovic.vic.gov.au.</p>
<p><i>Public Interest Disclosures Act 2012</i></p>	<p>Report actions in Annual Report. Report actions at each (monthly) Board meeting.</p>	<p>Disclosures of improper conduct by the Goulburn Broken CMA or its employees may be made to IBAC. (See page 97 for information).</p> <p>There were nil reported during 2020-21</p>
<p><i>Country Fire Authority Act 1958</i></p>	<p>Work with other related organisations to assist in the control, prevention and suppression of fires within the Catchment.</p>	<p>Goulburn Broken CMA has policies relating to waterway operations that comply with the Act and reduce fire risk.</p>

Act or policy	Board's major tasks	2020-21 issues and status
<i>Flora and Fauna Guarantee Act 1988</i>	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.	Goulburn Broken CMA continues to support the implementation of action statements and recovery plans for threatened flora and fauna by DELWP.
<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>Environmental Protection Act 1970</i>	<p>Protection agencies need to report in their annual reporting processes, actions taken to implement the Policy (as per their responsibilities in State Environment Protection Policy (Waters of Victoria) and Schedules), so that the Environment Protection Authority can then report to the community.</p> <p>Outlines CMA roles with respect to setting goals, priorities and targets.</p> <p>Refers to water allocations and environmental flows.</p> <p>Relates to responsibilities of various agencies for ensuring sustainable agricultural activities with the catchment.</p> <p>Relates to the management of irrigation channels and drains.</p> <p>Refers to vegetation protection and rehabilitation.</p>	<p>Goulburn Broken CMA continues to undertake activities against the Regional Waterway Strategy, Regional Floodplain Management Strategy, Shepparton irrigation Land and Water Management Plan and the Biodiversity Strategy.</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 Environment, Land, Water and Planning as required.	For waterways in areas managed by DELWP 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>

Act or policy	Board's major tasks	2020-21 issues and status
<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.	Goulburn Broken CMA is an equal opportunity employer. In 2017 the first Diversity & Inclusion Action Plan was developed for the Goulburn Broken CMA. People, Safety and Wellbeing Manager is the contact for any complaints. Nil complaints were received in the reporting period. Of the Goulburn Broken CMA staff, 60 per cent are female and 40 per cent male (see page 83). Of the Goulburn Broken CMA Board members, as at 30 June 2020, 57 per cent are female and 43 per cent male (see page 90).
<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>	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> .	Goulburn Broken CMA processed 1,475 referral and advice applications relating to floodplain management and 97 applications for works on waterways for 2020-21. Statutory functions under Part 10 of the Water Act: <i>Target: Ninety per cent of statutory requirements (permits, referrals, advice and licences) associated with waterway and floodplain management are responded to within the prescribed period.)</i>
	Goulburn Broken CMA is a referral authority for applications from Department of Jobs, Precincts and Regions (<i>Mineral Resource Act, 1990</i>) for work plans on floodplain areas.	In 2020-21, 99 per cent of responses were within the prescribed period.
	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.	Statutory functions under Part 11 of the Water Act: <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> In 2020-21, 100 per cent of responses were within the prescribed period .
	Board is advised of application refusals at each (monthly) meeting.	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.
	Local government can request advice but are not required to implement it.	Advice has been provided where appropriate.
<i>Victorian Government Risk Management Framework</i>	The Victorian Government Risk Management Framework provides for a minimum risk management standard across Public Sector entities.	See page 89 for Statement regarding Goulburn Broken CMA compliance with the applicable Standing Directions under the <i>Financial Management Act 1994</i> .
<i>Victorian Managed Insurance Authority Act 1996</i>	Attestation by accountable officer in annual report which ensures that requirement is built into corporate planning and reporting processes.	
Government Advertising Expenditure	Relates to the disclosure of government advertising expenditure under FRD 221	Nil issues to report.

Act or policy	Board's major tasks	2020-21 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 competition 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>Local Jobs First Act 2003</i>	Local Jobs First aims to foster industry development by encouraging Victorian government departments and public bodies to genuinely consider Victorian, Australian and New Zealand supply. In regional Victoria, the policy applies to all procurement and project activities valued at \$1 million or more.	During 2020-21, Goulburn Broken CMA did not commence any contracts valued at over \$1million for which a Victorian Industry Participation Policy (VIPP) Plan or Local Industry Development Plan (LIDP) was required.
<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>OHS 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>OHS Act 2004</i> . Policies and procedures are available to staff on the portal (intranet). An OHS Report against agreed KPIs is provided to the Audit, Risk and Compliance Committee quarterly.
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 2020-21.
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 Gifts, Benefits & Hospitality Register. The register can be viewed on the Authority's website www.gbcma.vic.gov.au
<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>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.	Act introduced obligations began on 31 March 2021.

Statement of availability of other information

The Goulburn Broken CMA 2020-21 Annual Report is available on the website www.gbcma.vic.gov.au

Additional information available on request

In compliance with the requirements of the Standing Directions of the Assistant Treasurer, 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 overseas visits undertaken including a summary of the objectives and outcomes of each visit
- 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 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 84)
- 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 91)
- a statement of completion of declarations of pecuniary interests by relevant officers (on page 92).

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 2020-21).

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.

The 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

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
Phone: 1300 735 135
Email: see the website above for the secure email disclosure process, which also provides for anonymous disclosures.

Performance indicators

Performance area	Performance target	Progress 2020-21
Business management and governance	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 Framework 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.	80 per cent of policies and procedures updated within the 3 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
Regional planning and coordination	A Regional Catchment Strategy (RCS) approved by the Minister.	Goulburn Broken Regional Catchment Strategy was approved by the Minister in 2013. The Goulburn Broken RCS is currently being renewed and due for approval in September-2021.
	A stakeholder and community engagement framework / plan approved by the board.	Goulburn Broken Community Engagement and Action Plan 2018-20 was approved by the board and is 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 is currently underway in preparation of the renewal in 2022.
	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.
	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.
Regional delivery	Progress with implementation of the RCS (and its major sub-strategies) is reviewed by the board annually.	Progress with the Goulburn Broken Regional Catchment Strategy was provided to the Goulburn Broken CMA Board through of Final Review of the 2013 RCS.
	Projects / activities to implement the RCS are delivered and reported according to associated funding agreements.	Planned projects for 2020-21 were delivered and reported according to associated funding agreements.
	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 2020-21 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 2020-21 were delivered and reported according to associated funding agreements.

Strategic organisational measures

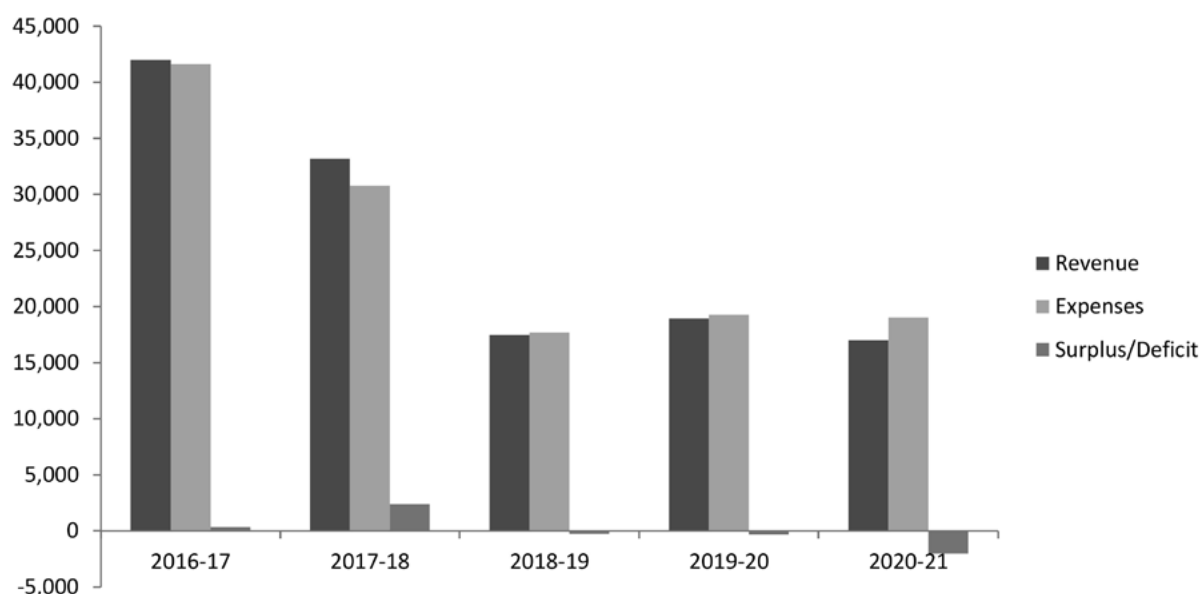
Performance area	Performance indicators	Targets	Progress 2020-21
NRM Results	Catchment objectives are achieved or evidence demonstrates movement towards meeting the objectives.	20-30 year objectives for Catchment condition.	On target. See pages 12 to 15 and 20 to 27 for further detail.
Client Focused	Clients and stakeholders value the services received from the Goulburn Broken CMA and see the services making a positive contribution to catchment condition.	<p>Satisfaction rating as rated by people having contact with the CMA.</p> <p>Awareness of the Goulburn Broken CMA as a land, water and biodiversity management body.</p>	<p>The 2017 Wallis Community Awareness survey found:</p> <ul style="list-style-type: none"> Those who had been in contact with the CMA gave an average satisfaction rating of 6.6 out of 10 for their experience dealing with them. This was not significantly different to 2012 (6.1). Total awareness of the Goulburn Broken CMA was at a historical high of 86 per cent - an increase of 4 per cent on 2012 levels. <p>Subject to funding availability, the next community awareness survey will be held in 2021.</p>
Operational Effectiveness	Projects delivered as planned, aligned to Goulburn Broken CMA strategy, on time, on budget, and to an agreed quality.	<p>Progress against agreed RCS Implementation Plan.</p> <p>Performance against Annual Internal Audit Plan.</p> <p>% projects finished on time and on budget (trend over time, and by service provider).</p>	<p>On track. As outlined in the Goulburn Broken CMA RCS Final Review</p> <p>All Audits completed per the Internal Audit 3 year workplan.</p> <p>In 2020-21, standard output targets for program areas have been met for 84 per cent of funding lines during the financial year (41 from 49 funding lines). This compares to 64 per cent in 2019-20.</p>
Financial	Goulburn Broken CMA optimises investment to onground works by minimising (as much as possible) the costs incurred by the CMA in facilitating the delivery of NRM activities within the Catchment.	<p>Ratio of CMA staff : \$ works on the ground (as a measure of leverage).</p> <p>Growth in income (incl. proportion of Govt. to Non-Govt.).</p>	<p>Ratio of 2.8 FTE staff for every \$1 million of onground works.</p> <p>The total government funded revenue decreased by 8 per cent from prior year at \$15 million and accounts for 89 per cent of total revenue. The majority of the decrease is due to reduced State Government funds relating to Sustainable Irrigation Program.</p>
People	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.	<p>Organisational Leadership (in the Organisational Performance Excellence Review).</p> <p>Overall job satisfaction (% of staff).</p>	<p>7.5/10 recognised at best practice level from Organisational Performance Excellence Review 2015.</p> <p>As at 2020, 78% of staff were satisfied with their job.</p>
Governance and Social Responsibility	Governance structures and processes enable the board to professionally and competently discharge their responsibilities to the Catchment community.	<p>Strategy and purpose (Aggregated results from Board Assessment).</p> <p>Compliance and Reporting (Aggregated results from Board Assessment).</p>	On track.

Financial results summary: current plus past four years

	2016-17	2017-18	2018-19	2019-20	2020-21
Revenue and expenditure					
State Government	12,033	14,802	12,117	13,639	12,020
Australian Government	28,516	17,065	2,499	2,694	3,002
Government contributions	40,549	31,867	14,616	16,333	15,022
Revenue from government entities	781	863	1,739	869	615
Other revenues	654	432	1,109	1,740	1,371
Total Revenue	41,984	33,162	17,464	18,941	17,008
Programs Expenditure	41,627	30,779	17,698	19,197	18,965
Interest	2	-	-	62	59
Total expenses	41,629	30,779	17,698	19,259	19,024
NET RESULT	355	2,383	(234)	(318)	(2,016)
Balance sheet items					
Current assets					
Cash	23,733	14,692	13,808	13,404	11,977
Receivables	555	898	2,042	1,475	1,480
Prepayments	158	216	187	154	155
Total current assets	24,446	15,806	16,037	15,033	13,612
Non-Financial assets	1,120	970	1,154	2,451	2,433
Total assets	25,566	16,776	17,191	17,484	16,045
Current liabilities					
Trade creditors	1,340	1,084	1,390	817	2,512
Unearned revenue/Contract Liabilities	12,269	1,173	1,176	1,221	-
Borrowings	14	-	103	675	805
Accruals	720	590	663	333	301
Provisions	1,904	2,256	2,000	1,907	2,027
Total current liabilities	16,247	5,103	5,332	4,953	5,645
Non-current liabilities					
Borrowings	-	-	418	1,388	1,259
Other	40	11	13	33	47
Total non-current liabilities	40	11	431	1,421	1,306
NET ASSETS	9,279	11,662	11,428	11,110	9,094
Equity items					
Contributed capital	4,209	4,209	4,209	4,209	4,209
Reserves	5,070	7,453	7,219	6,901	4,885
TOTAL EQUITY	9,279	11,662	11,428	11,110	9,094
Cash flow items					
Net operating activities	10,269	(8,821)	(949)	(180)	(927)
Net investing activities	(218)	(206)	98	75	81
Net financing activities	(27)	(14)	(33)	(299)	(581)
Net cash movement	10,024	(9,014)	(884)	(404)	(1,427)

Financial results summary: current plus past four years (Cont'd)

Financial summary 2016-17 to 2020-21, \$'000



Significant changes in financial results for 2020-21

	Corporate Plan 2020-21 \$'000	Actual 2020-21 \$'000	Actual Variance to Corporate Plan \$'000
Comprehensive Operating Statement			
Total revenue ⁱ	18,429	17,008	(1,421)
Total expenditure	(20,276)	(19,024)	1,252
Net result	(1,847)	(2,016)	(169)
Statement of financial position			
Cash and receivables	11,272	13,457	2,185
Other	220	155	(65)
Non-current assets	2,252	2,433	181
Total assets	13,744	16,045	2,301
Liabilities			
Payables	1,500	2,813	(1,313)
Employee provisions	2,060	2,074	(14)
Lease Liabilities	1,890	2,064	(174)
Contract Liabilities ⁱ	-	-	-
Total liabilities	5,450	6,951	(1,501)
Net assets	8,294	9,094	800

i. For comparative purposes Corporate Plan excludes effect of AASB 15 on Revenue and Contract Liabilities

Current Financial Review

The variance in the actual result to end June 2021 of \$2.0 million deficit compared to the Corporate Plan of \$1.8 million deficit with revenue \$1.4m and expenditure \$1.2m lower than Corporate Plan was predominantly driven by reduced State funding provided through the State's environmental contribution levy. The fifth tranche of the environmental contribution levy (EC5) commenced on 1 July 2020 for a period of four years, with the first year of funding having reduced against both prior year and budget. The reduction in EC5 funding was partly offset by \$1.445M received under the 'Working for Victoria' program which was funded by the Victorian Government's Economic Stimulus package. This funding provided employment opportunities for 25 participants to work on key natural resource management projects across the Goulburn Broken catchment. This project was completed by June 2021 and is not expected to be continued.

Significant changes or factors affecting performance

Other than as detailed on the previous page, there were no other significant changes or factors which affected our performance against the Corporate Plan.

Consultancy expenditure

	2016-17		2017-18		2018-19		2019-20		2020-21	
	No.	\$ (excl. GST)	No.	\$ (excl. GST)	No.	\$ (excl. GST)	No.	\$ (excl. GST)	No.	\$ (excl. GST)
Consultancies valued at \$10,000 or greater	43	1,185,788	40	890,530	27	665,437	26	631,581	16	498,346
Consultancies valued at less than \$10,000	32	111,794	22	66,491	29	112,412	25	100,254	9	68,734

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.

Information and Communication Technology expenditure

For the 2020-21 reporting period, Goulburn Broken CMA had a total ICT expenditure of \$1,071,576 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		\$	\$
931,116	140,460		29,675	110,785

- 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 implementation that has been recharged to CMA's.

Other financial disclosures

Local Jobs First

During 2020-21, 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 2020-21.

Capital projects

Goulburn Broken CMA did not manage any capital projects.

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 and we recognise that we play a key role in advancing social and sustainable outcomes for Victorians.

In 2020, the Authority developed a Social Procurement Strategy to enable a strategic, agency-wide approach to how it will deliver social and sustainable outcomes through our procurement in accordance with the Social Procurement Framework and beyond.

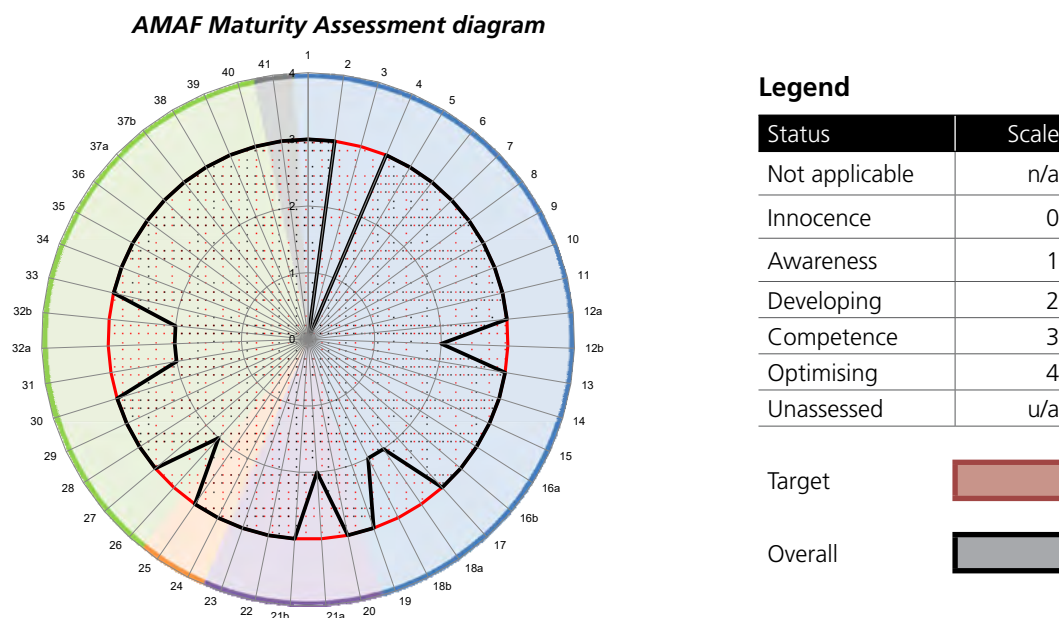
In that Strategy, the Authority prioritised five SPF objectives – detailed in the table below, with their associated reporting metrics. These SPF objectives were chosen based on their high degree of alignment with the Authority's strategic direction and values as well as being best positioned to advance our identified social procurement opportunities.

Objective prioritised	Outcome sought	SPF Reporting metric
Opportunities for Victorian Aboriginal people	Employment of Victorian Aboriginal people by suppliers to the Victorian Government	Number of Victorian Aboriginal businesses engaged. Total expenditure with Victorian Aboriginal businesses.
	Purchasing from Victorian Aboriginal businesses	Number of Victorian Aboriginal businesses engaged and the number as a proportion of the suppliers used by the CMA
Environmentally sustainable outputs	Project-specific requirements to use sustainable resources and to manage waste and pollution	Total number of contracts entered into with Victorian Government suppliers that have clauses relating to both sustainable resources and to manage waste and pollution. This may cover items such as: <ul style="list-style-type: none"> • Recycled/reused water as a percentage of total • Percentage or measure of water consumption • Percentage of procurement materials sourced from accredited supply chains.
	Use of recycled content in construction works	Total number of contracts entered into with Victorian Government suppliers that have clauses relating to recycled content in works e.g. plant guards and weed mats.
Environmentally sustainable business practices	Adoption of sustainable business practices by suppliers to the Victorian Government	Total number of contracts entered into with Victorian Government suppliers that have a clause for environmentally sustainable business practices. This may cover items such as: <ul style="list-style-type: none"> • Application and achievement of industry recognised standards • The number of suppliers with an Environmental Management System that indicates the extent of their environmental awareness.
Implementation of the Climate Change policy objectives	Procurement of outputs that are resilient against the impacts of climate change	Total number of contracts entered into with Victorian Government suppliers that have a clause for procurement of outputs that are resilient against the impacts of climate change. This may cover items such as: <ul style="list-style-type: none"> • Application and achievement of national and international standards related to the management of climate change risks • Measurement of emissions and/or emission targets.
Use of local suppliers	Supporting local communities and SME's	Percentage of total expenditure of local suppliers.

Asset Management Accountability Framework (AMAF) maturity assessment

The following sections summarise the Authority's assessment of maturity against the requirements of the Asset Management Accountability Framework (AMAF). The AMAF is a non-prescriptive, devolved accountability model of asset management that requires compliance with 41 mandatory requirements. The requirements can be found on the DTF website (www.dtf.vic.gov.au).

The Authority's target maturity rating is 'competence', meaning systems and processes fully in place, consistently applied and systematically meeting the AMAF requirement, including a continuous improvement process to expand system performance above AMAF minimum requirements.



Leadership and accountability (Requirements 1-19)

The Authority has met its target maturity level under most of the requirements in this category. The Authority did not comply with some requirements in the area of reporting and performance assessment for minor equipment.

Planning (Requirements 20-23)

The Authority has met its target maturity level under most of the requirements in this category. The Authority did not comply with some requirements as ICT Strategy is currently in review and long term Asset planning yet to be finalised.

Acquisition (Requirements 24 and 25)

The Authority has met its target maturity level under all requirements under this category.

Operation (Requirements 26-40)

The Authority has met its target maturity level under most of the requirements in this category. The Authority did not comply with some requirements in the area of establishing regular maintenance program for minor equipment.

Disposal (Requirement 41)

The Authority has met its target maturity level in this category.

Financial Statements

Goulburn Broken Catchment Management Authority

Australian Business Number (ABN): 89 184 039 725

Accountable Officers' and Chief Finance Officer's declaration

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 2021 and financial position of the Goulburn Broken CMA at 30 June 2021.

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 23 September 2021.



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

23 September 2021

Independent Auditor's Report

To the Board of Goulburn Broken Catchment Management Authority

Opinion	<p>I have audited the financial report of Goulburn Broken Catchment Management Authority (the authority) which comprises the:</p> <ul style="list-style-type: none"> • balance sheet as at 30 June 2021 • comprehensive operating statement for the year then ended • statement of changes in equity for the year then ended • cash flow statement for the year then ended • notes to the financial statements, including significant accounting policies • accountable officers' and chief finance officer's declaration. <p>In my opinion, the financial report presents fairly, in all material respects, the financial position of the authority as at 30 June 2021 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>
Basis for Opinion	<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>
Board's responsibilities for the financial report	<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
28 September 2021



Paul Martin
as delegate for the Auditor-General of Victoria

Comprehensive Operating Statement for the financial year ended 30 June 2021ⁱ

	Note	2021 \$000	2020 \$000
Revenue and income from transactions			
Government contributions	2.2.1	15,022	16,333
Interest	2.2.2	35	140
Other income	2.2.3	1,884	2,427
Total revenue and income from transactions		16,941	18,900
Expenses from transactions			
Employee expenses	3.2	(6,108)	(5,995)
Depreciation & amortisation	4.1.1	(586)	(510)
Materials, grants, contracts and consultancies	3.3	(10,444)	(10,957)
Information technology and communication expenses	3.4	(1,023)	(901)
Other operating expenses	3.5	(863)	(896)
Total expenses from transactions		(19,024)	(19,259)
Net result from transactions (net operating balance)		(2,083)	(359)
Other economic flows included in net result			
Net gain/(loss) on non-financial assets ⁱⁱ	8.2	67	41
Net result for the period		(2,016)	(318)
Comprehensive result		(2,016)	(318)

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 2021ⁱ

	Note	2021 \$'000	2020 \$'000
Assets			
Financial assets			
Cash and deposits	6.1	11,977	13,404
Receivables	5.1	1,480	1,475
Total financial assets		13,457	14,879
Non-Financial assets			
Property, plant and equipment	4.1	2,232	2,286
Intangible assets	4.2	201	165
Other non-financial assets	5.3	155	154
Total non-financial assets		2,588	2,605
Total assets		16,045	17,484
Liabilities			
Payables	5.2	2,813	1,150
Contract Liabilities	5.4	-	1,221
Interest bearing liabilities	6.2.1	2,064	2,063
Employee benefits	3.2.2	2,074	1,940
Total liabilities		6,951	6,374
Net assets		9,094	11,110
Equity			
Contributed Capital		4,209	4,209
Accumulated Surplus		-	-
Reserves	8.3	4,885	6,901
Net Worth		9,094	11,110

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 2021ⁱ

	Note	2021 \$000	2020 \$000
Cash flow from operating activities			
Receipts			
Receipts from government		14,312	16,920
Revenue from other Government Entities		274	956
Goods and services tax received from the ATO ⁱⁱ		494	786
Interest received		35	142
Other receipts		1,420	1,763
Total Receipts		16,535	20,567
Payments			
Payments to suppliers and employees		(17,403)	(20,685)
Interest paid		(59)	(62)
Total Payments		(17,462)	(20,747)
Net cash flows from/(used in) operating activities	6.1.1	(927)	(180)
Cash flow from investing activities			
Proceeds from sale of property, plant and equipment		245	259
Payment for property, plant and equipment		(164)	(184)
Net cash flows from/(used in) investing activities		81	75
Cash flow from financing activities			
Repayment of principal portion of lease liabilities ⁱⁱⁱ		(581)	(299)
Net cash from/(used in) financing activities		(581)	(299)
Net (decrease) / increase in cash held		(1,427)	(404)
Cash and cash equivalents at beginning of year		13,404	13,808
Cash and cash equivalents at end of year	6.1	11,977	13,404

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 2021ⁱ

	Contributions by owner \$000	Reserves \$000	Accumulated funds \$000	Total \$000
Balance at 1 July 2019	4,209	7,219	-	11,428
Net result for the period	-	-	(318)	(318)
Transfer to / (from) Reserves	-	(318)	318	-
Balance at 30 June 2020	4,209	6,901	-	11,110
Total Comprehensive (Deficit) for the year			(2,016)	(2,016)
Transfer to / (from) Reserves		(2,016)	2,016	-
Balance at 30 June 2021	4,209	4,885	-	9,094

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 2021

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);
- arrangement is within the scope of AASB 15 or AASB 1058 (Note 2.2.1);
- employee benefit provisions (Note 3.2.2);
- estimation of useful lives (Note 4.1.1);
- accrued expenses (Note 5.2);
- contract liability (Note 5.4);
- 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).

All amounts in the financial statements have been rounded to the nearest \$1,000 unless otherwise stated.

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 2021

COVID-19 Health Pandemic

During the 2020 reporting period a viral pneumonia caused by a previously unknown pathogen emerged internationally. The pathogen was identified as a novel coronavirus subsequently named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), more commonly known simply as Coronavirus, which causes the illness known as Coronavirus disease 2019 (COVID-19).

The effects of COVID-19 are pervasive, and has impacted all industries, with infection numbers surging globally.

Initial responses by the Government included travel restrictions, both nationally and internationally, social distancing guidelines, declarations of State of Emergency across the nation, and eventually implementation of lock-downs across the country. During this time, the Commonwealth and State Government also implemented various initiatives to limit the financial impact of COVID-19, including:

- business financial assistance packages;
- JobSeeker and JobKeeper policies;
- moratorium on rental evictions as well as rental relief grants; and
- essential workers receiving free childcare during the crisis.

The Victorian Government also encouraged Departments and Agencies, including the Authority, to ensure that suppliers receive payments within five days of invoices where possible.

While the Authority has been affected by COVID-19, the effects have been limited to date. The Authority was well placed to transition to working remotely, and as such the closure of our offices had minimal affect on our activities. The Authority has utilised a number of initiatives to attempt to combat the effects on the staff and the community by COVID-19 and its accompanying restrictions, which to date have shown some success. The Authority has also been able to maintain its existing staffing levels throughout the crisis.

During the year the authority participated in a project offered through the Victorian Government's Economic Stimulus package called Working for Victoria. The Goulburn Broken CMA received \$1.445M for the 'Working for Victoria' project which provided employment opportunities for 25 participants to work on key natural resource management projects across the Goulburn Broken catchment. This project was completed by June 2021 and is not expected to be continued.

From a financial perspective, as the Authority's funding is predominantly through State and Commonwealth Government Contributions, and the majority of the Authority's dealings are with other Government Departments and Agencies, management does not currently consider COVID-19 to have a material affect on any judgements or assumptions applied in the preparation of these financial statements.

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.

Structure

- 2.1 Summary of revenue and income that funds the delivery of our services
- 2.2 Income from transactions

2.1 Summary of revenue and income that funds the delivery of our services

	Note	2021 \$000	2020 \$000
Government contributions	2.2.1	15,022	16,333
Interest income	2.2.2	35	140
Other income	2.2.3	1,884	2,427
Total revenue and income from transactions		16,941	18,900

Income that funds delivery of the Authority's services are accounted for consistently with the requirements of the relevant accounting standards disclosed in the following notes.

Notes to the financial statements for the year ended 30 June 2021

2.2 Income from transactions

2.2.1 Government contributions

	2021 \$000	2020 \$000
Income recognised as income of not-for-profit entities (AASB 1058)		
State Government		
Corporate and Statewide	1,131	921
Sustainable Irrigation	4,479	7,038
River Health	4,054	3,703
Floodplain Management	1,025	836
Land and Biodiversity	1,331	1,141
	12,020	13,639
Income recognised as revenue from contract with customers		
Commonwealth Government		
National Landcare Program	2,898	2,653
Other Commonwealth Funding	104	41
	3,002	2,694
Total Government contributions	15,022	16,333

Grants recognised as income of not-for-profit entities (AASB 1058)

The Authority has determined that the grant income included in the table above under AASB 1058 has been earned under arrangements that are either not enforceable and/or not linked to sufficiently specific performance obligations.

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.

Grants recognised as revenue from contracts with customers (AASB 15)

Income from grants that are enforceable and with sufficiently specific performance obligations are accounted for as revenue from contracts with customers under AASB 15.

These grants relate to the provision of activities and services provided to the Commonwealth for the National Landcare Program. Revenue is recognised at the point in time 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 2021 the Authority recognised \$2,898K as revenue under AASB 15 (2020: \$2,653K).

2.2.2 Interest

	2021 \$000	2020 \$000
Interest on bank deposits	35	140
	35	140

Interest income includes interest received on bank term deposits. Interest income is recognised using the effective interest method which allocates the interest over the relevant period.

Notes to the financial statements for the year ended 30 June 2021

2.2.3 Other income

	2021 \$000	2020 \$000
Partnership Contributions - Government entities	615	869
Partnership Contributions – non-Government entities	276	84
Recoverable costs	926	1,432
Application fees	62	42
Other income	5	-
Total other income	1,884	2,427

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.

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 cost associated with the provision of services are recorded.

Structure

- 3.1 Expenses incurred in delivery of services
- 3.2 Employee expenses
- 3.3 Materials, grants, contracts and consultancies
- 3.4 Information technology and communication expenses
- 3.5 Other operating expenses

3.1 Expenses incurred in delivery of services

	Note	2021 \$000	2020 \$000
Employee expenses	3.2	6,108	5,995
Materials, maintenance, grants, contracts and consultancies	3.3	10,444	10,957
Information Technology and Communication expenses	3.4	1,023	901
Other operating expenses	3.5	863	896
Total expenses from delivery of services		18,438	18,749

3.2 Employee expenses

3.2.1 Employee expenses in the comprehensive operating statement

	2021 \$000	2020 \$000
Salaries & wages	4,740	4,660
Annual leave	393	386
Long service leave	145	137
Superannuation	483	467
FBT	200	184
Other	147	161
Total employee expenses	6,108	5,995

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.

Notes to the financial statements for the year ended 30 June 2021

3.2.2 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.

	2021 \$000	2020 \$000
Current provisions for employee benefits		
Time in lieu		
Unconditional and expected to be settled within 12 months	16	26
Annual leave		
Unconditional and expected to settle within 12 months	372	341
Unconditional and expected to settle after 12 months	37	48
Long service leave		
Unconditional and expected to settle within 12 months	25	47
Unconditional and expected to settle after 12 months	1,359	1,237
Provisions for on-costsⁱ		
Unconditional and expected to settle within 12 months	48	48
Unconditional and expected to settle after 12 months	170	160
Total current provisions	2,027	1,907
i. On-costs include payroll tax, superannuation and worker's compensation Insurance		
Non-current provisions for employee benefits		
Long service leave		
Conditional and expected to be settled after 12 months	43	30
Provision for on-costs		
Conditional and expected to be settled after 12 months	4	3
Total non-current provisions	47	33
Total provisions for employee benefits and on-costs	2,074	1,940

Reconciliation of movement in on-cost provision

	2021 \$000	2020 \$000
Opening balance	211	225
Additional provisions recognised	64	66
Reductions arising from payments/other sacrifices of future economic benefits	(47)	(73)
Unwind of discount and effect of changes in the discount rate/Reductions arising from re measurement of payroll tax	(6)	(7)
Closing balance	222	211

Notes to the financial statements for the year ended 30 June 2021

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.

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 amounts 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.

3.2.3 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 ESS 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 that are paid or payable during the reporting period.

	2021 Rate %	2021 \$000	2020 \$000
Defined benefit plans: ⁱ			
Vision Super defined benefits scheme	9.5	6	6
Emergency Services Superannuation Scheme	various	35	43
Defined contribution plans			
Vision Super defined contribution scheme	9.5	127	131
AWARE Super	9.5	128	128
Other	9.5	186	159
		482	467

i. The bases for determining the level of contributions is determined by the various actuaries of the defined benefit superannuation plans

There was \$17,895 in contributions outstanding to the above schemes as at 30 June 2021 (2020: \$35,385) The expected contributions to be paid to the Defined Benefit category of Vision Super for the year ending 30 June 2022 is \$11,055.

Notes to the financial statements for the year ended 30 June 2021

3.3 Materials, grants, contracts and consultancies

	2021 \$000	2020 \$000
Grants paid	1,554	2,781
Consultants	1,536	1,889
Contractors	6,994	6,018
Materials	360	269
Total materials, maintenance, grants, contracts and consultancies	10,444	10,957

Grants are recognised in the period in which they are paid or payable.

Materials, contracts and consultancies are recognised as an expense in the reporting period in which they are incurred.

3.4 Information Technology and Communication expenses

	2021 \$000	2020 \$000
Information Technology and Communication expenses	1,023	901
Lease expenses	1,023	901

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 (2.2.3). The amount of recoverable costs for shared services was \$526K (2020: \$467K).

3.5 Other operating expenses

	2021 \$000	2020 \$000
Victorian Auditor-General's Office for audit of financial statements	23	24
Internal audit expenses	39	19
Short-term lease expenses	151	156
Events and Publicity	70	119
Other expenses	580	578
	863	896

Other operating expenses generally represent the day-to-day running costs incurred in normal operations and are recognised as an expense in the reporting period in which they are incurred.

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 2021

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.

Structure

- 4.1 Total property, plant and equipment
- 4.2 Intangible assets

4.1 Total property, plant and equipment

	Gross carrying amount		Accumulated Depreciation		Net carrying amount	
	2021 \$000	2020 \$000	2021 \$000	2020 \$000	2021 \$000	2020 \$000
Buildings at fair value	1,209	1,209	(377)	(207)	832	1,002
Plant and equipment at fair value	1,455	1,347	(1,260)	(1,177)	195	170
Computer equipment	-	-	-	-	-	-
Computer equipment purchased at cost	-	-	-	-	-	-
Motor vehicles at fair value	1,817	1,529	(612)	(415)	1,205	1,114
Motor vehicles under finance lease		-		-		-
	4,481	4,085	(2,249)	(1,799)	2,232	2,286

4.1(a) Total right-of-use assets: buildings, plant, equipment 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 plant and equipment by right-of-use assets.

	Gross carrying amount		Accumulated Depreciation		Net carrying amount	
	2021 \$000	2020 \$000	2021 \$000	2020 \$000	2021 \$000	2020 \$000
Right of Use Buildings at fair value	1,171	1,171	(339)	(169)	832	1,002
Motor vehicles at fair value	1,513	1,225	(341)	(200)	1,172	1,025
Net Carrying amount	2,684	2,396	(680)	(369)	2,004	2,027

Notes to the financial statements for the year ended 30 June 2021

	Right of Use Buildings at fair value \$000	Motor vehicles at fair value \$000
2021		
Opening balance – 1 July 2020	1,002	1,025
Additions	-	583
Disposals	-	(178)
Depreciation expense	(170)	(258)
Closing balance – 30 June 2021	832	1,172
2020		
Opening balance – 1 July 2019 ⁱ	1,171	521
Additions	-	670
Disposals	-	-
Depreciation expense	(169)	(166)
Closing balance – 30 June 2020	1,002	1,025

i. This balance represents the initial recognition of right-of-use assets recorded on the balance sheet on 1 July 2019 along with the transfer from finance lease assets (recognised under AASB 117 at 30 June 2019) to right-of-use assets (recognised under AASB 16 at 1 July 2019).

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 \$1,000, or in the case of ICT equipment in excess of \$300, and a useful life of more than one year are recognised as an asset. All other assets acquired are expensed.

Right-of-use asset acquired by lessees (Under AASB 16 Leases from 1 July 2019) – 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.

Subsequent measurement:

Non-financial physical assets are revalued every five years in accordance with FRD 103I - Non-Financial Physical Assets.

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.

Right-of-use asset – Subsequent measurement

Property, plant and equipment are subsequently measured at fair value less accumulated depreciation and impairment.

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 2021

4.1.1 Depreciation and amortisation

Charge for the period ⁱ	2021 \$000	2020 \$000
Buildings	169	169
Plant & equipment	85	57
Motor vehicles	314	284
Motor vehicles under finance lease	-	-
Intangible assets	18	-
Total depreciation and amortisation	586	510

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.

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.

Notes to the financial statements for the year ended 30 June 2021

4.1.2 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	Motor vehicles under finance lease \$000	Computer Equipment purchased at cost \$000	Total \$000
2021						
Opening balance	1,002	170	1,114	-	-	2,286
Additions	-	110	583	-	-	693
Disposals	-	-	(178)	-	-	(178)
Depreciation	(170)	(85)	(314)	-	-	(569)
Amortisation	-	-	-	-	-	-
Closing balance	832	195	1,205	-	-	2,232
2020						
Opening balance	-	118	425	521	55	1,119
Recognition of right-of-use assets on initial application of AASB 16 ⁱ	1,171	-	521	-	-	1,692
Adjusted balance at 1 July 2019	-	-	-	(521)	-	(521)
Additions	-	109	670	-	-	779
Disposals	-	-	(218)	-	(55)	(273)
Depreciation	(169)	(57)	(284)	-	-	(510)
Amortisation	-	-	-	-	-	-
Closing balance	1,002	170	1,114	-	-	2,286

i. This balance represents the initial recognition of right-of-use assets recorded on the balance sheet on 1 July 2019 relating to operating leases.

4.2 Intangible assets

Computer software	2021 \$000	2020 \$000
Gross carrying amount		
Opening Balance	201	71
Computer software in development and not in use	(165)	130
Additions	219	-
Disposals	-	-
Closing balance	255	201
Accumulated Amortisation		
Opening Balance	(36)	(36)
Amortisation	(18)	-
Closing balance	(54)	(36)
Net book value at end of financial year	201	165

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.

Notes to the financial statements for the year ended 30 June 2021

An internally generated intangible asset arising from development (or from the development phase of an internal project) is recognised if, and only if, all of the following are demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- an intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

Significant intangible assets

The Authority has capitalised software development expenditure for the development of its finance, payroll and human resource system which was a multi year project. The software was held as computer software in development in 2020 and first commenced use on the 1st of February 2021. The carrying amount of the capitalised software development expenditure is \$200,892 (2020: \$nil). Its useful life is five years and will be fully amortised in 2026.

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 4.1.1

5. Other assets and liabilities

Introduction

This section sets out those assets and liabilities that arose from the Authority's operations.

Structure

- 5.1 Receivables
- 5.2 Payables
- 5.3 Other non-financial assets
- 5.4 Contract Liabilities

Significant judgement: Accrued revenue and accrued expenses

Accrued revenue and accrued expenses represent goods or services that have been received or supplied but have not been invoiced by the supplier.

In estimating the amount of an accrued revenue or accrued expense, consideration is given to the stage of completion of the services being performed.

5.1 Receivables

	2021 \$000	2020 \$000
Contractual		
Government grants receivables	1,316	1,264
Trade receivables	16	39
Total contractual	1,332	1,303
Statutory		
GST input tax credits recoverable	148	172
Total current receivables	1,480	1,475

Notes to the financial statements for the year ended 30 June 2021

Receivables consist of:

- Contractual receivables, which are classified as financial instruments and categorised as 'financial assets at amortised cost'. They are initially recognised at fair value plus any directly attributable transaction costs. The Authority holds the contractual receivables with the objective to collect the contractual cash flows and therefore subsequently measures them at amortised cost using the effective interest method, less any impairment. Subsequent to initial measurement they are measured at amortised cost less any impairment; and
- Statutory receivables, which do not arise from contracts and are recognised and measured similarly to contractual receivables (except for impairment), but are not classified as financial instruments for disclosure purposes.

Trade and other receivables are due for settlement 30 days from the 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.

5.2 Payables

	2021 \$000	2020 \$000
Contractual		
Trade payables	2,454	766
Accrued expenses	301	333
	2,755	1,099
Statutory		
FBT payable	50	41
Payroll tax	8	10
	58	51
Total current payables	2,813	1,150

Payables consist of:

- Contractual payables, classified as financial instruments and measured at amortised cost. Accounts payable represent liabilities for goods and services provided to the Authority prior to the end of the financial year that are unpaid; and
- Statutory payables, that are recognised and measured similarly to contractual payables, but are not classified as financial instruments and not included in the category of financial liabilities at amortised cost, because they do not arise from contracts.

Payables for supplies and services have an average credit period of 30 days.

5.2.1 Maturity analysis of contractual payablesⁱ

	Carrying amount \$000	Maturity dates		
		Less than 1 \$000	1-3 months \$000	3-6 months \$000
2021 Payables				
Trade payables	2,454	2,454	-	-
Accrued expenses	301	301	-	-
	2,755	2,755	-	-
2020 Payables				
Trade payables	766	707	59	-
Accrued expenses	333	333	-	-
	1,099	1,040	59	-

i. Maturity Analysis is presented using the contractual undiscounted cash flows.

Notes to the financial statements for the year ended 30 June 2021

5.3 Other non-financial assets

Current other assets	2021 \$000	2020 \$000
Prepayments	155	154
Total other assets	155	154

Total current other assets include prepayments which represent payments in advance of receipt of goods or services or that part of expenditure made in one accounting period covering a term extending beyond that period.

5.4 Contract Liabilities

Contract liabilities	2021 \$000	2020 \$000
Opening balance	1,221	1,176
Add: Payments received for performance obligations yet to be completed during the period	-	45
Less: Payment of liability to external party in the reporting period	1,221	-
Total contract liabilities	-	1,221
Represented by:		
<i>Current contract liabilities</i>	-	1,221
Non-current contract liabilities	-	-
Non-current contract liabilities	-	-

During the period the remaining balance of contract liabilities was transferred to an external party as directed by the customer due to the closure of the contract with the Authority and no further services to be provided to the customer by the Authority.

6. How we financed our operations

This section provides information on the sources of finance utilised by the Authority during its operations, 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.

Structure

- 6.1 Cash flow information and balances
- 6.2 Leases
- 6.3 Carry forward project funding

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	2021 \$000	2020 \$000
Cash on hand	1	1
Cash at bank	2,030	2,492
Deposits at call	9,946	10,911
Balance as per cash flow statement	11,977	13,404

Notes to the financial statements for the year ended 30 June 2021

6.1.1 Reconciliation of net result to cash flow from operating activities

	2021 \$000	2020 \$000
Net result for the period	(2,016)	(318)
Non-cash movements		
(Gain) / loss on disposal of non-current assets	(67)	(41)
Depreciation and amortisation of non-current assets	586	510
Movements in assets and liabilities		
Decrease/(increase) in receivables	(5)	567
Decrease/(increase) in prepayments	(1)	32
(Decrease)/increase in contract liabilities	(1,221)	45
(Decrease)/increase in payables	1,663	(903)
(Decrease)/increase in employee benefits	134	(72)
Net cash flows from/(used in) operating activities	(927)	(180)

6.2 Leases

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 are short-term. The Authority has elected not to recognise right-of-use assets and lease liabilities for these leases.

6.2 (a) Right-of-use Assets

Right-of-use assets are presented in note 4.1(a)

6.2 (b) Amounts recognised in the Statement of Comprehensive Statement

The following amounts are recognised in the Statement of Comprehensive Operating Statement relating to leases:

	2021 \$000	2020 \$000
Interest Expense on lease liabilities	59	62
Expenses relating to short term leases	151	156
Depreciation	427	336
Total amount recognised in the statement of comprehensive statement	636	553

6.2 (c) Amounts recognised in the Statement of Cashflows

The following amounts are recognised in the Statement of Cashflows for the year ending 30 June 2021 relating to leases.

	2021 \$000	2020 \$000
Total cash outflow for leases	640	361

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.

Notes to the financial statements for the year ended 30 June 2021

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 2021, the Authority was committed to short term leases and the total commitment at that date was \$118K (2020: \$156K).

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.

6.2.1 Total Interest bearing liabilities

Interest bearing liabilities	Minimum future lease payments ⁱ	
	2021 \$000	2020 \$000
Not longer than 1 year	852	733
Longer than 1 year but not longer than 5 years	1,311	1,279
Longer than 5 years	-	189
Minimum future lease payments	2,163	2,201
Less future finance charges	(99)	(138)
Present value of minimum lease payments	2,064	2,063
Included in the financial statements as:		
Interest bearing liabilities - current	805	675
Interest bearing liabilities - non-current	1,259	1,388
Total	2,064	2,063

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.

Notes to the financial statements for the year ended 30 June 2021

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 Note 8.3 for Committed funds reserve. At balance date the Authority has cash and cash equivalents that will be utilised to complete these projects in future financial years.

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.

Structure

- 7.1 Financial instruments specific disclosures
- 7.2 Contingent assets and contingent liabilities
- 7.3 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. Due to the nature of the Authority's activities, certain financial assets and financial liabilities arise under statute rather than a contract, and as such, do not meet the definition of 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 applies AASB 9 simplified approach for all contractual receivables to measure the expected credit losses using a lifetime expected loss allowance based on the assumptions about the risk of default and the expected loss rates. The Authority has grouped contractual receivables on shared credit risk characteristics and days past due, and the credit loss rate based on the Authority's past history, existing market conditions, as well as forward-looking estimates at the end of the financial year.

Notes to the financial statements for the year ended 30 June 2021

Under this approach, the expected loss rate for the year ending 30 June 2021 has been calculated at 0%, and as such no loss allowance has been recognised. The Authority has a low expected loss rate due to majority of funding sourced from State and Commonwealth government.

On this basis, the Authority determines the opening loss allowance on initial application date of AASB 9 and the closing loss allowance at the end of the financial year as follows:

30 June 2021	Current	Less than 1 month	1-3 months	3 months - 1 year	1-5 years	Total
Expected Loss Rate (%)	0	0	0	0	0	
Gross carrying amount of contractual receivables	1,326	-	-	6	-	1,332
Loss Allowance	-	-	-	-	-	-
30 June 2021						
Expected Loss Rate (%)	0	0	0	0	0	
Gross carrying amount of contractual receivables	1,289	-	-	14	-	1,303
Loss Allowance	-	-	-	-	-	-

Statutory receivables at amortised cost

The Authority's non-contractual receivables arising from statutory requirements are not financial instruments. However, they are nevertheless recognised and measured in accordance with AASB 9 requirements as if those receivables are financial instruments.

Statutory receivables are considered to have low credit risk, taking into account the counterparty's credit rating, risk of default and capacity to meet contractual cash flow obligations in the near term. As a result, the loss allowance recognised for these financial assets during the period was limited to 12 months expected losses.

The expected credit loss rate is 0% (2020: 0%) and the credit loss allowance is 0% (2020: Nil).

7.1.2 Financial instruments: Categorisation

2021	Contractual financial assets at amortised cost \$'000	Contractual financial liabilities at amortised cost \$'000	Total \$'000
Contractual financial assets			
Cash and deposits	11,977	-	11,977
Receivables ⁱ			
Trade and government grant receivables ⁱ	1,332	-	1,332
Total contractual financial assets	13,309	-	13,309
Contractual financial liabilities			
Payables ⁱ			
Trade payables	-	2,454	2,454
Accrued expenses	-	301	301
Lease liabilities	-	2,064	2,064
Total contractual financial liabilities	-	4,819	4,819

i. The total amounts disclosed here exclude statutory amounts.

Notes to the financial statements for the year ended 30 June 2021

2020	Contractual financial assets at amortised cost \$'000	Contractual financial liabilities at amortised cost \$'000	Total \$'000
Contractual financial assets			
Cash and deposits	13,404	-	13,404
Receivables ⁱ			
Trade and government grant receivables ⁱ	1,303	-	1,303
Total contractual financial assets	14,707	-	14,707
Contractual financial liabilities			
Payables ⁱ			
Trade payables	-	766	766
Accrued expenses	-	333	333
Lease liabilities	-	2,063	2,063
Total contractual financial liabilities	-	3,162	3,162

i. The total amounts disclosed here exclude statutory amounts.

7.1.3 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. For cash assets, the Authority's policy is to only deal with banks with high credit-ratings assigned by international credit-rating agencies. All cash and deposits are held with Authorised Deposit Taking Institute's (ADI's) with a minimum credit rating of AAA.

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 and deposits 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.

Financial instruments: Market risk

The Authority's exposure to market risk is primarily through interest rate risk with significant surplus funds held in deposits at call 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 surplus funds with the State Government Central Banking System (CBS) in compliance with the Standing Directions 2018 under the *Financial Management Act 1994* (2018 Directions).

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.

Notes to the financial statements for the year ended 30 June 2021

Interest rate exposure of financial instruments

2021	Weighted average interest rate %	Carrying amount \$000	Interest rate exposure		
			Fixed interest rate \$000	Variable interest rate \$000	Non-interest bearing \$000
Financial assets					
Cash and deposits	0.25	11,977	-	9,946	2,031
Contractual receivables		1,332	-	-	1,332
Total financial assets		13,309	-	9,946	3,363
Financial liabilities					
Lease Liabilities	3.19	(2,064)	(2,064)	-	-
Contractual payables		(2,755)	-	-	(2,755)
Total financial liabilities		(4,819)	(2,064)	-	(2,755)

2020	Weighted average interest rate %	Carrying amount \$000	Interest rate exposure		
			Fixed interest rate \$000	Variable interest rate \$000	Non-interest bearing \$000
Financial assets					
Cash and deposits	0.65	13,404	-	10,911	2,493
Contractual receivables		1,303	-	-	1,303
Total financial assets		14,707	-	10,911	3,796
Financial liabilities					
Lease Liabilities	3.45	(2,063)	(2,063)	-	-
Contractual payables		(1,099)	-	-	(1,099)
Total financial liabilities		(3,162)	(2,063)	-	(1,099)

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
2021					
Cash and deposits ⁱ	11,977	(119)	(119)	119	119
2020					
Cash and deposits ⁱ	13,404	(134)	(134)	134	134

i. Cash and deposits includes \$9,926K (2020: \$10,911K) that is exposed to floating rates movements. Sensitivities to these movements are calculated as follows:

2021: $\$9,946 \times 0.01 = \$99,460$

2020: $\$10,911 \times 0.01 = \$109,110$

Notes to the financial statements for the year ended 30 June 2021

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.

	2021 \$000	2020 \$000
Contingent assets		
As at 30 June 2021, the Authority has no known contingent assets.	-	-
Contingent liabilities		
As at 30 June 2021, the Authority has no known contingent liabilities.	-	-

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.

The Authority's Property, plant and equipment are carried at fair value.

In addition, the fair values of other financial assets and liabilities which are carried at amortised cost, also need to be determined for disclosure purposes.

The Authority determines the policies and procedures for determining fair values for both financial and non-financial assets and liabilities as required.

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.

7.3.1 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 2020-21 reporting period.

These financial instruments include:

Financial assets	Financial liabilities
Cash and deposits	
Receivables:	Payables:
<ul style="list-style-type: none"> • Trade receivables 	<ul style="list-style-type: none"> • Trade payables
<ul style="list-style-type: none"> • Accrued revenue 	<ul style="list-style-type: none"> • Accrued expenses
	<ul style="list-style-type: none"> • Lease liabilities

Notes to the financial statements for the year ended 30 June 2021

7.3.2 Fair value determination: non-financial physical assets

Fair value measurement hierarchy

2021	Carrying amount as at 30 June \$000	Fair Value measurement at end of reporting period using:		
		Level 1 ⁱ \$000	Level 2 ⁱ \$000	Level 3 ⁱ \$000
Buildings at fair value				
Buildings - right of use	832	-	832	-
Total Buildings at fair value	832	-	832	-
Plant and Equipment at fair value				
Plant and Equipment	195	-	-	195
Total Plant and Equipment at fair value	195	-	-	195
Motor vehicles at fair value				
Motor vehicles	1,205	-	-	1,205
Total motor vehicles at fair value	1,205	-	-	1,205

i. Classified in accordance with the fair value hierarchy, see Note 7.3.

2020	Carrying amount as at 30 June \$000	Fair Value measurement at end of reporting period using:		
		Level 1 ⁱ \$000	Level 2 ⁱ \$000	Level 3 ⁱ \$000
Buildings at fair value				
Buildings - right of use	1,002	-	1,002	-
Total Buildings at fair value	1,002	-	1,002	-
Plant and Equipment at fair value				
Plant and Equipment	170	-	-	170
Total Plant and Equipment at fair value	170	-	-	170
Motor vehicles at fair value				
Motor vehicles	1,114	-	-	1,114
Total motor vehicles at fair value	1,114	-	-	1,114

i. Classified in accordance with the fair value hierarchy, see Note 7.3.

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(a)).

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.

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 2021.

For all assets measured at fair value, the current use is considered the highest and best use.

Notes to the financial statements for the year ended 30 June 2021

Reconciliation of Level 3 fair value movements

	Motor vehicles \$000	Plant and equipment \$000	Office furniture and equipment \$000	Total \$000
2021				
Opening Balance	1,114	170	-	1,284
Purchases (sales)	583	110		693
Transfers in (out) of Level 3	-	-		-
Depreciation	(314)	(85)		(399)
Gains or losses recognised in net result	(178)	-		(178)
Closing balance	1,205	195		1,400

	Motor vehicles \$000	Plant and equipment \$000	Office furniture and equipment \$000	Total \$000
2020				
Opening Balance	946	118	55	1,119
Purchases (sales)	670	109	-	779
Transfers in (out) of Level 3	-	-	-	0
Depreciation	(284)	(57)	-	(341)
Gains or losses recognised in net result	(218)	-	(55)	(273)
Closing balance	1,114	170	-	1,284

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

8. Other disclosures

This section provides additional material disclosures required by accounting standards or otherwise, for the understanding of this financial report.

Structure

- 8.1 Ex-gratia expenses
- 8.2 Other economic flows included in net result
- 8.3 Reserves
- 8.4 Responsible persons
- 8.5 Remuneration of executive officers
- 8.6 Related parties
- 8.7 Remuneration of auditors
- 8.8 Subsequent events
- 8.9 Economic dependency
- 8.10 Australian Accounting Standards issued that are not yet effective
- 8.11 Glossary of technical terms

Notes to the financial statements for the year ended 30 June 2021

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 2021 (2020 \$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.

	2021 \$000	2020 \$000
Net gain/(loss) on non-financial assets		
Net gain/(loss) on disposal of property, plant and equipment		
Proceeds from sale of non-financial assets	245	259
Less written down value	(178)	(218)
Net gain/(loss) on non-financial assets	67	41

8.3 Reserves

	2021 \$000	2020 \$000
Committed funds reserve ⁱ		
Balance at the beginning of the reporting period	6,901	7,219
Net transfers (to) / from accumulated funds	(2,016)	(318)
Balance at the end of the reporting period	4,885	6,901

- i. The Committed funds reserve has been established to recognise that the Authority receives funding for programs in advance of the program works taking place. The Authority is committed to expending these funds in accordance with its Corporate Plan in succeeding years. At the end of the financial year any Accumulated Funds which represents unexpended program funding, has been transferred to the reserve, while any losses which represent program expenditure in excess of current year funding is transferred from the reserve.

8.4 Responsible persons

In accordance with the Ministerial Directions issued by the Minister for Finance under the *Financial Management Act 1994*, the following disclosures are made regarding responsible persons for the reporting period.

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. Lisa Neville, MP	1 July 2020 to 30 June 2021
Acting Minister for Water	The Hon. Richard Wynne, MP	15 February 2021 to 30 June 2021
Minister for Energy, Environment and Climate Change	The Hon. Liliansa D'Ambrosio, MP	1 July 2020 to 30 June 2021

Position		Period
Chair	H Reynolds	1 July 2020 to 24 June 2021
Acting Chair	A Weston	25 June 2021 to 30 June 2021
Board Member	A Weston	1 July 2020 to 30 June 2021
Board Member	R Harris	1 July 2020 to 30 June 2021
Board Member	S Lolicato	1 July 2020 to 30 June 2021
Board Member	J Boynton	1 July 2020 to 30 June 2021
Board Member	S Parker	1 July 2020 to 30 June 2021
Board Member	L Miller	14 Dec 2020 to 30 June 2021
CEO	C Cumming	1 July 2020 to 30 June 2021
Acting CEO	C Walters	11 Jan 2021 to 15 Jan 2021 and 31 May 2021 to 4 June 2021

Notes to the financial statements for the year ended 30 June 2021

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	2021	2020
\$1-\$9,999	1	6
\$10,000-\$19,999	6	4
\$20,000-\$29,999	1	1
\$30,000-\$39,999	-	1
\$50,000-\$59,999	-	1
\$190,000-\$199,999	-	1
\$260,000-\$269,999	1	-
Total number of responsible persons	9	14
Total remuneration \$	\$387,416	\$404,038

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 Department of Parliamentary Services' Financial Report.

8.5 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 8.4 and Note 8.6.

Income bands	2021	2020
Short-term employee benefits	-	\$830,789
Post-employment benefits	-	\$70,140
Other long-term benefits	-	\$26,224
Total remuneration	-	\$927,153
Total number of executives ⁱ	-	6
Total annualised employee equivalents ⁱⁱ	-	5.5

i. The total number of executive officers excludes persons who meet the definition of Key Management Personnel (KMP) of the entity under *AASB 124 Related Party Disclosures* and are reported within the related parties note disclosure (Note 8.4)

ii. Annualised employee equivalent is based on the time fraction worked over the reporting period and has been adjusted for periods of Acting CEO whereby Officers have been defined as KMP and reported within note 8.4.

In the previous period, the Executive Officers disclosed included senior managers that held contracts under the previous Victorian Public Sector Commission's (VPSC) Government Sector Executive Remuneration Panel (GSERP). With the commencement of the Victorian Public Entity Executive Remuneration (PEER) contracts in the 2020 reporting year, the senior managers no longer meet the PEER policy definition and are no longer reported as Executive officers in 2021.

8.6 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 implement IT platform across the sector. The Authority received funding from the following government-related entities under normal commercial terms and conditions:

Notes to the financial statements for the year ended 30 June 2021

Entity	2021 Funding received (\$000)	2020 Funding received (\$000)
Department of Environment, Land, Water and Planning	10,827	14,714
Department of Jobs, Precincts & Regions (formerly DEDJTR)	1,864	59
Glenelg Hopkins Catchment Management Authority	194	191
Corangamite Catchment Management Authority	176	247
North East Catchment Management Authority	155	251
East Gippsland Catchment Management Authority	152	221
Wimmera Catchment Management Authority	97	237
West Gippsland Catchment Management Authority	75	239
Department of Treasury and Finance (VicFleet Lease Mgt)	37	-
Goulburn Valley Water	34	124
Victorian Environmental Water Holder	-	73
North Central Catchment Management Authority	-	34

Receivables outstanding at 30 June 2021: \$1,316,038 (2020: \$321,131).

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	2021 Payments made (\$000)	2020 Payments made (\$000)
Goulburn Murray Water	1,858	3,827
Department of Environment, Land, Water and Planning	1,732	819
Department of Treasury & Finance	379	239
Parks Victoria	357	55
Department of Jobs, Precincts & Regions (formerly DEDJTR)	170	327
North Central Catchment Management Authority	63	121
West Gippsland Catchment Management Authority	-	202
Trust for Nature (Victoria)	-	49

Payables outstanding at 30 June 2021: \$2,057,655. (2020: \$302,132).

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 Department of Parliamentary Services' 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	2021	2020
Short-term employee benefits	352,670	369,436
Post-employment benefits	29,609	28,225
Other long-term benefits	5,137	6,377
Total	387,416	404,038

Notes to the financial statements for the year ended 30 June 2021

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.

8.7 Remuneration of auditors

	2021 \$000	2020 \$000
Victorian Auditor-General's Office for audit of financial statements	23	24
Internal audit costs	39	19
Total auditors' remuneration	62	43

8.8 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.

The continuing COVID-19 Health Pandemic is not expected to significantly affect the operations, the results of those operations, or the state of affairs of the Authority in future financial years.

8.9 Economic dependency

Goulburn Broken CMA is dependent on the Department of Environment, Land, Water and Planning 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 Environment, Land, Water and Planning will not continue to support the CMA.

8.10 Australian Accounting Standards issued that are not yet effective

Certain new Australian Accounting Standards (AAS) have been published that are not mandatory for the 30 June 2021 reporting period. DTF assesses the impact of all these new standards and advises the Authority of their applicability and early adoption where applicable. The following is a list of the AASs issued but are not yet effective for the 2020-21 reporting period.

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><i>AASB 2020-5 Amendments to Australian Accounting Standards – Insurance Contracts</i> was issued in July 2020 with the intention to reduce the costs application and easing transition by deferring its effective date to annual periods beginning on or after 1 January 2023 instead of 1 January 2021.</p> <p>This standard currently does not apply to the not-for-profit public sector entities.</p>	1 Jan 2023	The assessment has indicated that there will be no significant impact on the Authority's financial statements.

Notes to the financial statements for the year ended 30 June 2021

Topic	Key requirements	Applicable for annual reporting periods beginning on or after	Estimated impact on Financial Statements
AASB 2020-1 Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non Current	This Standard amends AASB 101 to clarify requirements for the presentation of liabilities in the statement of financial position as current or non-current. A liability is classified as non-current if an entity has the right at the end of the reporting period to defer settlement of the liability for at least 12 months after the reporting period. The meaning of settlement of a liability is also clarified. <i>AASB 2020-6 Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non-current – Deferral of Effective Date</i> was issued in August 2020 and defers the effective date to annual reporting periods beginning on or after 1 January 2023 instead of 1 January 2022, with earlier application permitted.	1 January 2023.	The assessment has indicated that there will be no significant impact on the Authority's financial statements.
AASB 2021-3 Amendments to Australian Accounting Standards – COVID-19-Related Rent Concessions beyond 30 June 2021	This Standard amends AASB 16 to extend by one year the application period of the practical expedient added to AASB 16 by <i>AASB 2020-4 Amendments to Australian Accounting Standards – COVID-19-Related Rent Concessions</i> . The practical expedient permits lessees not to assess whether rent concessions that occur as a direct consequence of the COVID-19 pandemic and meet specified conditions are lease modifications and, instead, to account for those rent concessions as if they were not lease modifications (e.g. account for as variable lease payment instead). This standard extends the practical expedient to rent concessions that reduce only lease payments originally due on or before 30 June 2022, provided the other conditions for applying the practical expedient are met	1 April 2021	The assessment has indicated that there will be no significant impact on the Authority's financial statements.

8.12 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:

- (a) experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred); and
- (b) 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 2021

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:

- a) cash;
- b) an equity instrument of another entity;
- c) 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; or
- d) a contract that will or may be settled in the entity's own equity instruments and is:
 - a non-derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity instruments; or
 - 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) 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; or
- b) a contract that will or may be settled in the entity's own equity instruments and is:
 - a non-derivative for which the entity is or may be obliged to deliver a variable number of the entity's own equity instruments; or
 - 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) a balance sheet as at the end of the period;
- b) a comprehensive operating statement for the period;
- c) a statement of changes in equity for the period;
- d) a cash flow statement for the period;
- e) notes, comprising a summary of significant accounting policies and other explanatory information;
- f) comparative information in respect of the preceding period as specified in paragraph 38 of *AASB 101 Presentation of Financial Statements*; and
- g) 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.

Notes to the financial statements for the year ended 30 June 2021

General government sector comprises all government departments, authorities, 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.

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.

Supplies and services generally represent cost of goods sold and the day-to-day running costs, including maintenance costs, incurred in the normal operations of the Authority.

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; and
- 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.

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.

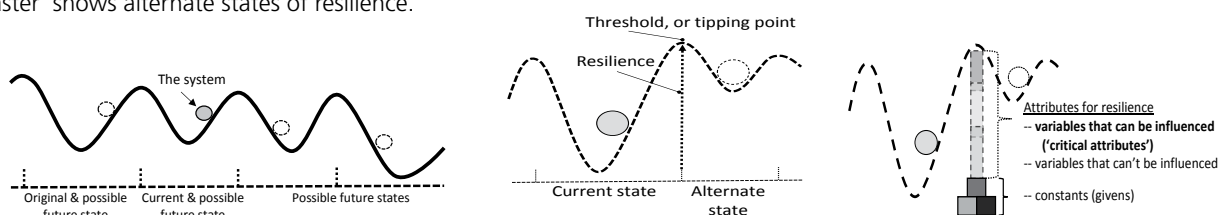
Solution: Goulburn Broken CMA uses a resilience model to describe the current state, identify desired long-term future states, and determine required actions.

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 2013-2019 and its current renewal. The approach emerged from the 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'** (Coroher 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 52), community (page 28), 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 population viability of 20 flagship species' and '65 per cent reduction in total phosphorus exported from the catchment'.

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, the Goulburn Broken CMA orders information according to the equation: $\text{Outputs} \times \text{Assumptions} = \text{Outcomes}$, 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 the Goulburn Broken CMA's website 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. See the graph that indicates the relative maturity or stages of implementation

within investment areas on page 155.

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 7) and subsequent rolling-up has so far only been done for the Agricultural Floodplains (see Sustainable Irrigation Program).

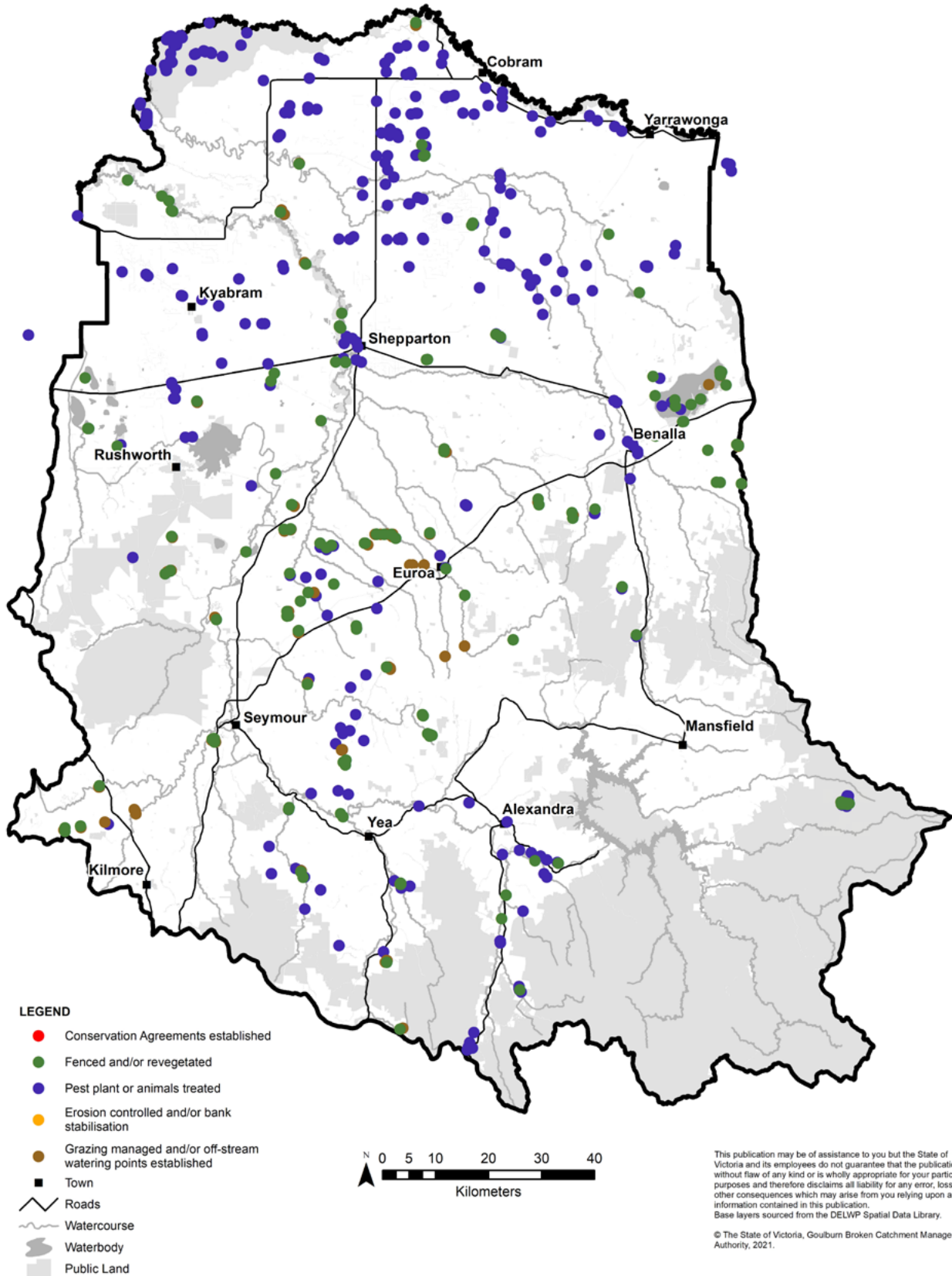
Structuring and communicating long-term progress are works-in-progress that try to retain the integrity of Goulburn Broken CMA's evaluation efforts over two decades while aligning with emerging national and state approaches.

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 80 and 88).

Appendix 2: Works

1 July 2020 to 30 June 2021

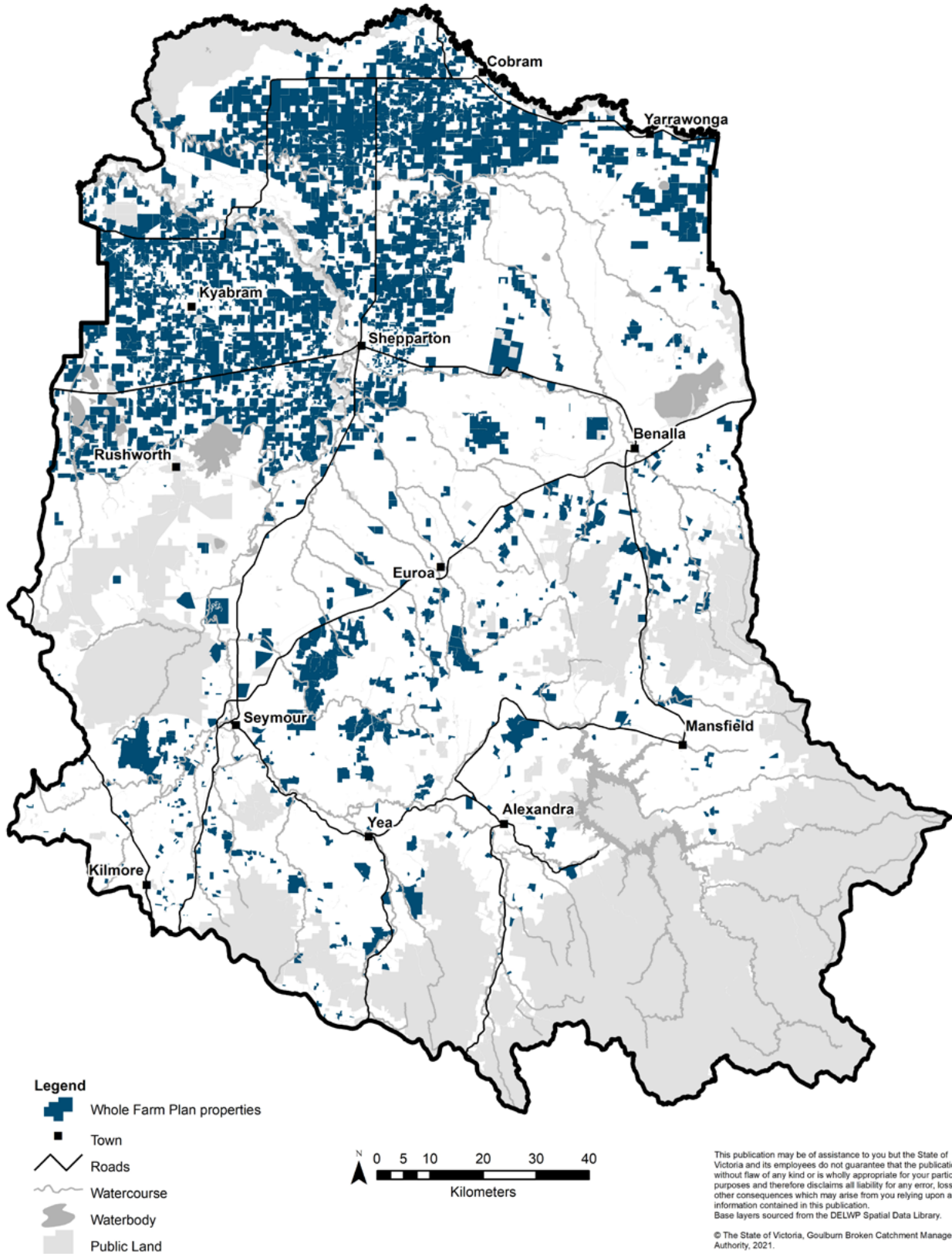
This map shows onground works completed in 2020-21 through Goulburn Broken CMA programs. These works relate to outputs listed in tables throughout this Annual Report. Some major works under Waterways, Floodplain Management and Sustainable Irrigation Programs are not shown. Ongoing works that landowners 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 3: Properties covered by a whole farm plan

to 30 June 2021

This map shows the properties covered by a whole farm plan or modernised whole farm plan completed since the start of the Program.



Appendix 4: Outputs - detailed list of achievements

Standard GB Threat or Impact Managed	Output	Land & Biodiversity		
		Target ⁱ	Achieved	% Achieved
		Threat		
Land and water use practices				
Stock grazing (ha = terrestrial; km = riparian)	Fence terrestrial remnant vegetation (ha)	249	331	133
	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) ^{xvi}			
Induced Threat				
Saline water & high watertables				
Surface water ⁱⁱⁱ	Laser levelling (ha) ⁱⁱ			
	Drain – primary built (including hybrid; km) ^{iv}			
	Drain – community built (km)			
	Weir – replace (no.)			
	Farm reuse systems installed (no.) ^v			
	Drain – additional water diverted from regional drains (ML)			
	Irrigation systems – improved (ha) ^{vi}			
Sub-surface water	Pasture – plant (ha)			
	Groundwater pumps - public installed (new; no.)			
	Groundwater pumps - private installed (new; no.)			
	Volume water pumped - increase (ML)			
	Tile drains – install (ha)			
Nutrient-rich & turbid water & suspended solids	Revegetation - plantation / farm forestry (ha)			
	Waste water treatment plants - install (no.)			
Instream and near-stream erosion	Stormwater management projects (no.) ^{vii}			
	Bed and bank protection actions (km) ^{viii}			
Changed flow pattern	Instream & tributary erosion controlled (km)			
	Environmental water use (ML) ^{ix}			
Weed invasion	Weeds – woody weed management (ha)	11,805	9,883	84
	Weeds – aquatic weeds controlled/eradicated (km)			
	Targeted infestations of weeds in high priority areas covered by control programs (ha) ^x	11,805	9,883	84
Pest animals	Pest animal control (ha) ^{xi}	102,603	124,686	122
Impact				
Habitat loss - terrestrial	Revegetation - plant natives within or next to remnants (ha) ^{xii}	279	329	118
	Revegetation - plant natives away from remnants (ha)			
Habitat loss – instream	Fish release (no.)			
	Vertical slot fishway (no.)			
	Rock ramp fishway (no.)			
	Fish barrier removal (no.)			
Habitat loss – wetlands	Instream habitat (no.) ^{xiii}			
	Reinstate flood regime (ML) ^{xiv}			
	Construct new wetland (ha)			
Habitat loss – threatened species	Threatened Species Recovery Plan and Action Statements (no. projects)			
Planning	Whole farm plans (no.) ^{xv}			

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: 2012-13 = Farm Water Program onground achievements (2,163) + 60 per cent of area put under whole farm plans [new (8,424) + modernised (9,075)]; 2013-14 = Farm Water Program's SIR onground achievements (3,736) + 60 per cent of area put under whole farm plans [new (4,224) + modernised (4,403) – Farm Water Program's SIR onground achievements (3,736)]; 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, 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.

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. 6 kilometres were constructed during 2009-10 and 3 kilometres were prepared for handover to Goulburn-Murray Water for it to manage.

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. In 2012-13 and 2013-14 the number of new systems was assumed to be: 100 per cent of projects install a new system i.e. new systems and extensions of existing systems were both counted as 'new systems'.

vi Assumptions: From 2014-15, area improved = laser levelling (which itself includes an assumption based on whole farm plan area - see footnote ii) + pressurised irrigation systems (micro or drip + irrigation); 2013-14 = Farm Water Program's SIR onground achievements (laser grading + overhead spray + drip; 3,736 + 567 + 0) + 70 per cent of area put under whole farm plans [new (4,224) + modernised (4,403) less Farm Water Program's SIR onground achievements]. 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.

2020-21									Total achieved							
Sustainable Irrigation			Waterways & Floodplain			Total Catchment			2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14	2012-13
Target ¹	Achieved	% Achieved	Target ¹	Achieved	% Achieved	Target ¹	Achieved	% Achieved								
40	34	84				289	365	126	547	331	589	696	468	385	1,004	1,783
									8	2		137	3	168	128	73
				153			153		112	166	161	294	244	141	87	126
				36			36		33	48	26	35	38	70	42	6.8
				32			32		22	17	17	25	19	15	3	1
75	11	15				75	11	15	6		104	18	70	112	0	329
683	3,676	538				683	3,676	538	7,580	2,538	3,979	4,460	3,553	4,220	6,671	12,662
	55						55		17	32	4					1
										5						
											36	5	51	9	64	25
	4,947						4,947		7,790	2,538	5,174	4,460	3,553	4,745	7,330	
									0	0.30	0.51	0.62	0.91	0.40	0.20	0.65
				628,691			628,691		772,400	449,506	812,240	479,164	698,264	339,318	714,378	299,667
40	1,015	2,537	34	128	378	11,879	11,026	93	3,326	1,555	4,060	7,481	1,363	2,317	210	
				8			8		28	9	10	9	14	97	3	77
40	1,436	3,591	44	213	487	11,889	11,533	97	5,773	2,099	4,441	8,529	2,894	3,359	3,643	953
40	34	84				102,643	124,720	122	112,621	1,429	4,019	10,423	7,321	22,880	31,201	29,749
40	196	490	6	82	1,374	325	607	187	634	625	413	487	750	549	1,211	2,957
																517
															2	
				20			20		259	581	627	363	334	357	337	
				379,114			379,114		362,512	174,355	415,010	254,188	439,740	500	363,436	2,959
15	61	407				15	61	407	117	61	55	74	51	71	79	186

- x This includes 'Weeds woody weed management'. Department of Primary Industries Biosecurity Victoria works were completed outside of the Corporate Plan from 2009-10. From 2010-11 achievements include Department of Primary Industries Farm Services Victoria, River health investment area and Fire Recovery Program works only. 2012-13 figures do not include 9,315 hectares for weeds and 10,500 hectares for rabbit control. 2013-14 figures do not include 12,880 hectares for weeds and 6,175 hectares for rabbit control. 2014-15 achievements do not include 10,060 hectares for weeds and 6,850 hectares for rabbit control completed by DEDJTR Biosecurity Victoria. 2015-16 achievements do not include 11,820 hectares for weeds and 7,480 hectares for rabbit control completed by DEDJTR Biosecurity Victoria. 2016-17 achievements do not include 7,781 hectares for weeds and 2,911 hectares for rabbit control completed by DEDJTR Biosecurity Victoria. 2017-18 achievements do not include 11,001 hectares for weeds and 6,400 hectares for rabbit control completed by DEDJTR Biosecurity Victoria. 2018-19 achievements do not include 20,995 hectares for weeds and 3,486 hectares for rabbit control completed by DJPR AgVic Biosecurity & Agriculture Services. 2019-20 achievements do not include 14,000 hectares for weeds and 1806 hectares for rabbit control completed by DJPR AgVic Biosecurity & Agriculture Services. 2020-21 achievements do not include 19,234 hectares for weeds and 3002 hectares for rabbit control completed by DJPR AgVic Biosecurity & Agriculture Services (see page 67).
- xi Output included for the first time in 2018-19, superseding the two separate outputs of fox and rabbit control, to encompass the broader range of pest animals being controlled.

- xii Natural regeneration from the Caring for our Country, Targeting Landscape Scale Biodiversity project are included: 1,676.38 hectares for 2012-13. 2013-14, 2014-15, 2015-16 & 2016-17 achievements do not include 1,080, 175, 186.8 & 624.6 hectares of revegetation achieved outside the Catchment through the Sand Ridge Woodlands project that Goulburn Broken CMA delivered in partnership with Murray Local Land Services and NSW National Parks and Wildlife Service.
- xiii 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.
- xiv Figures for years prior to 2018-19 entered retrospectively in 2018-19.
- xv Figures for total catchment historically include those outside of Sustainable Irrigation program also, which were for comprehensive Level 2 whole farm plans, equivalent to Shepparton Irrigation Region's whole farm plan. Level 1 is a short course that is a precursor to Level 2 and not included in these figures. In 2012-13 whole farm plans under the Land and Biodiversity Program were achieved by Department of Environment and Primary Industries, using funding received outside of the Corporate Plan.
- xvi This achievement is only reported once a covenant is on title, which may take more than 12 months.

Appendix 5: Major Strategic References

Legislation

Federal legislation

Aboriginal and Torres Strait Islander Heritage Protection Act 1984
Australian Heritage Commission Act 1975 (Register of the National Estate)
Environment Protection and Biodiversity Conservation Act 1999
Native Title Act 1993
Water Act 2007
Water Amendment Act 2008

State legislation

Aboriginal Heritage Act, 2006
Aboriginal Heritage Regulations 2007
Alpine Resorts (Management) Act 1997
Building Regulations 1996
Catchment and Land Protection Act 1994
Charter of Human Rights and Responsibilities Act 2006
Climate Change Act 2010
Conservation, Forests and Lands Act 1987
Crown Land (Reserves) Act 1978
Environment Protection Act 1970
Equal Opportunity Act 2010
Financial Management Act 1994
Fisheries Act 1995
Flora and Fauna Guarantee Act 1988
Forests Act 1958
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
Water Act 1989
Wildlife Act 1975
Yorta Yorta Cooperative Management Agreement 2004

Relevant Policies, Strategies and Agreements

International

China Australia Migratory Bird Agreement 1986
Convention of Migratory Species (Bonn Convention) 1979
Greenhouse Gas Protocol (www.ghgprotocol.org)
Japan Australia Migratory Bird Agreement 1974
Ramsar Convention on Wetlands 1971
Republic of Korea Australia Migratory Bird Agreement 2009
UN Declaration on the rights of Indigenous Peoples 2007

Federal

A Directory of Important Wetlands in Australia (2001)
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 2007
Australian Weed Strategy 2017- 2027
Barmah-Millewa Environmental Management Plan 2005
Basin Salinity Management Strategy 2030 (2001-2015)
COAG Closing the Gap initiative 2008
Empowered Communities: Empowered Peoples – Design report (2015)
Living Murray First Step Decision (2003)
Murray-Darling Basin Plan 2012
Murray-Darling Native Fish Management Strategy 2004
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 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 and Action Plan (2015)
Wetlands Policy of the Commonwealth Government of Australia 1997
www.thelivingmurray.gov.au

Relevant Policies, Strategies and Agreements (continued)

State

Aboriginal Participation Guidelines for Victorian Catchment Management Authorities 2015 and Implementation Plan 2016

Advisory lists of rare and threatened species in Victoria

Agriculture Victoria Strategy: Supporting Victoria's Agriculture 2017

Alpine Resorts Strategic Plan 2012

Biosecurity Victoria Strategic Plan for Victoria 2009

Community Engagement and Partnerships Framework for Victoria's Catchment Management Authorities 2013 and Toolkit 2017

DELWP Guide to Good Governance – board members

Food & Fibre Strategy 2016

Indigenous Partnership Framework 2007-10 (reviewed 2010)

Invasive Plants and Animal Policy Framework 2010

Native Vegetation Net gain accounting first approximation report 2008 (DSE)

Our Catchments, Our Communities – Integrated Catchment Management in Victoria 2016-19

Permitted Clearing of Native Vegetation – Biodiversity Assessment Guidelines 2013

Policy for Sustainable Recreation and Tourism on Victoria's Public Land 2002

Protecting Victoria's Environment – Biodiversity 2037 (2017)

Regional Riparian Action Plan (2015)

Soil Health Strategy 2012

Sustainability Charter for Victoria's State Forests 2006

Threatened Species Recovery Plans

Victoria's Native Vegetation Management - A. Framework for Action

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 Plan 2017-2020

Victorian Climate Change Framework 2016

Victorian Floodplain Management Strategy 2016

Victorian Landcare Program Strategic Plan 2012

Victorian Planning Provisions 1998-1999

Victorian Protective Data Security Standards 2018

Victorian Waterway Management Strategy 2013

Water for Victoria – Water Plan (2016)

Regional

Barmah Strategic Action Plan

Climate Change Adaptation Plan for Natural Resource Management in the Goulburn Broken Catchment 2016

Dryland Landscape Strategy 2009-2011

Goulburn Broken Biodiversity Strategy 2016-2021

Goulburn Broken Biosecurity, Invasive Plants and Animal Strategy 2019-2025

Goulburn Broken Climate Change Integration Strategy 2012-2015

Goulburn Broken CMA Climate Change position paper 2007

Goulburn Broken CMA Organisational Environmental Footprint Policy 2011

Goulburn Broken CMA Organisational Environmental Footprint Strategy and Action Plan 2012-2014

Goulburn Broken CMA Diversity & Inclusion Plan 2017-2022

Goulburn Broken Communications and Marketing Strategy and Action Plan 2018-2020

Goulburn Broken Community Engagement Strategy and Action Plan 2018-2020

Goulburn Broken Community NRM Action Plan 2020-2025

Goulburn Broken Corporate Plan 2020-21 to 2024-25

Goulburn Broken Dryland Salinity Management Plan 1990 (and reviews 1995, 2001, 2008)

Goulburn Broken Hand Health Statement 2014

Goulburn Broken Indigenous Participation Plan 2021

Goulburn Broken Land Health Strategy 2017-2020

Goulburn Broken Native Vegetation Plan 2003

Goulburn Broken Regional Catchment Strategy 2013-2019

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 Workforce Strategy and Action Plan (including capability) 2013-2018

Goulburn Murray Resilience Strategy 2020

Hume Regional Growth Plan (2014)

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

Ready for Change – Evaluation Strategy for the Goulburn Broken Catchment 2017-2022

Recognition and Settlement Agreement (Taungurung Land and Waters Council)

Shepparton Irrigation Region Land and Water Management Plan 1990-2020 (latest update 2016)

Taungurung Country Plan 2016

Various Memoranda of Understanding

Yorta Yorta Cooperative Management Agreement 2004

Yorta Yorta Nation Whole of Country Plan 2012-2017

Yorta Yorta Traditional Land Management Agreement 2010

Appendix 6: Roles of Catchment Partners

Catchment partners	Description	Role
Community groups and networks	Environmental and agricultural groups and networks such as Landcare, Conservation Management Networks and Friends of Groups.	The Catchment's 100+ natural resource management groups mobilise community involvement, attract corporate, philanthropic and government funding, and influence and implement significant parts of the Goulburn Broken RCS in local areas, usually with an emphasis on onground works. They are represented on many of the CMA's advisory groups and steering committees.
Traditional Owners	Taungurung Land and Waters Council and Yorta Yorta Nation Aboriginal Corporation.	Custodians of Traditional Ecological Knowledge and cultural heritage across the Catchment. Key role in natural resource management and planning, including protection and enhancement of cultural values, and integration of Traditional Owner perspectives, knowledge and cultural management practices.
Private land managers	Farmers, lifestyle landholders and corporations.	With more than two thirds of the Catchment's landscapes under private ownership, landholders invest significant resources (time, money and land) into natural resource management and reaching the outcomes of the Goulburn Broken RCS.
Victorian Government, agencies and statutory authorities	Parks Victoria, Water Corporations, Victorian Environmental Water Holder, Environmental Protection Authority, etc.	The Victorian Government funds the majority of natural resource management activities in the Catchment. These activities are guided by a range of policies and legislation and frequently delivered in partnership with other Victorian Government agencies and statutory authorities.
Australian Government and agencies	Murray-Darling Basin Authority, Commonwealth Environmental Water Office, Department of Agriculture, Water and the Environment, etc.	The Australian Government funds a significant number of natural resource management projects in the Catchment through its 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.	Services provided by councils are diverse. They include property, economic, human, recreational and cultural services. In terms of natural resource management, 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 natural resource management engagement, education and delivery (e.g. via local area plans).
Non-government organisations	Trust for Nature, philanthropic bodies etc	Non-government organisations are playing and increasingly important role as funding and delivery partners in natural resource management.
Education and research	Arthur Rylah Institute, universities and schools.	Support delivery, monitoring and evaluation of natural resource management activities.
Industry groups	Murray Dairy, Victorian Farmers Federation, Meat and Livestock Australia etc.	Strongly influence natural resource management through their networks and advisory roles with regional land managers and government.
Recreational users	Fishing, birding, four-wheel driving and boating groups.	Diverse interest-based 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 (e.g. fishing groups).

Appendix 7: Community grants

Below is a list of grants paid to community groups and organisations for projects during the 2020-21 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 2020-21	Amount paid \$ (ex GST)
Australian Government - Regional Land Partnerships Program	
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.	
Euroa Arboretum Inc.	
Linking Landscapes and Communities	\$35,392
Goulburn Murray Landcare Network Inc.	
Floodplain Ecology Course	\$10,000
Growing regenerative Farming Systems	\$24,836
Linking Landscapes and Communities	\$5,000
Greta Valley Landcare Group	
Putting our heads together: Collaboration and knowledge sharing across the Catchments	\$4,250
Hughes Creek Catchment Collaborative Inc.	
Assessment and modelling of Soil Carbon profiles in the Hughes Creek catchment	\$3,000
Longwood Plains Conservation Management Network Inc	
Linking Landscapes and Communities	\$41,085
Regent Honeyeater Project Inc.	
Linking Landscapes and Communities	\$150,000
Riverine Plains Inc.	
Evaluating plant-based opportunities to increase soil carbon in cropping systems	\$20,000
South West Goulburn Landcare Inc	
Validating grazing effects on soil nutrients on farms	\$5,900
Strathbogie Ranges Conservation Management Network	
YouTube for Healthy Hectares	\$10,000
Superb Parrot Project	
Linking Landscapes and Communities	\$12,000
Taungurung Land and Waters Council	
Linking Landscapes and Communities	\$45,299
Mending Mountains for the Pygmy-possum	\$39,994
The Maize Association of Australia Inc.	
Managing sub-surface irrigation impacts on soil acidity	\$12,250
UP2US Landcare Alliance	
Inspiring small farms to grow big ideas	\$15,000
Upper Goulburn Landcare Network	
Growing regenerative Farming Systems	\$31,000
Victorian No Till Farmers Association	
Farmers Helping Farmers	\$33,476
Winton Wetlands Committee of Management Inc	
Linking Landscapes and Communities	\$11,184
Yea River Catchment Landcare Group	
From the Ground Up	\$1,000
Yorta Yorta Nation Aboriginal Corporation	
Linking Landscapes and Communities	\$122,654
Australian Government - Other	
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.	
Taungurung Land and Waters Council	
Mid Goulburn River off-channel habitat restoration	\$24,740
Victorian Government - Biodiversity Response Planning	
Biodiversity Response Planning (BRP) is an area-based planning approach to biodiversity conservation in Victoria; designed to strengthen alignment, collaboration and participation between government agencies, Traditional Owners, non-government agencies (NGOs) and the community. BRP aims to progressively deliver a collective area-based response to the statewide targets in Biodiversity 2037.	
Euroa Arboretum Inc.	
Ribbons of Blue and Sashes of Green	\$5,900
Goulburn Murray Landcare Network Inc.	
Ribbons of Blue and Sashes of Green	\$12,000
Longwood Plains Conservation Management Network Inc	
Ribbons of Blue and Sashes of Green	\$12,000
Regent Honeyeater Project Inc.	
Ribbons of Blue and Sashes of Green	\$135,669
Taungurung Land and Waters Council	
Ribbons of Blue and Sashes of Green	\$12,061

Total grants paid to community groups and other organisations 2020-21	Amount paid \$ (ex GST)
Trust for Nature	
Linking Lower Goulburn to Barmah	\$25,000
Winton Wetlands Committee of Management Inc	
Ribbons of Blue and Sashes of Green	\$8,550
Yorta Yorta Nation Aboriginal Corporation	
Linking Lower Goulburn to Barmah	\$20,999
Ribbons of Blue and Sashes of Green	\$5,204
Victorian Government - Our Catchments, Our Communities The Victorian Government provided \$22 million over four years to implement Our Catchments, Our Communities, ensuring our approach to catchment management is ready for future environmental and economic challenges and opportunities.	
Taungurung Land and Waters Council	
Onground works	\$37,124
Upper Goulburn Landcare Network	
Tree Storey	\$3,500
Victorian Government - Regional Riparian Action Plan The Regional Riparian Action Plan is a five-year plan to accelerate onground riparian management works to improve the health of riparian land along Victoria's regional rivers, estuaries and wetlands. Works include fencing to manage stock, revegetation programs, weed management and construction of off-stream watering systems.	
Euroa Arboretum Inc.	
Regional Riparian Action Plan	\$20,958
Victorian Government - Victorian Landcare Grants 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.	
Creighton Creek Landcare Inc	
Pest plant management and eradication	\$13,450
Hughes Creek Catchment Collaborative Inc.	
Community-based weeds and feral animal control program	\$1,500
Longwood Plains Conservation Management Network Inc	
Maintenance Grants	\$500
Strathbogie Tableland Landcare Group	
Strathbogie Township Bridge to Bridge trail extensions: maintenance equipment project	\$2,500
Taungurung Land and Waters Council	
Traditional Owner Engagement	\$1,304
Victorian Government - Victorian Water Programs Investment Framework 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.	
Committee for Greater Shepparton	
Sustainable Irrigation- Surface & Sub-surface 2016-20	\$2,000
Euroa Arboretum Inc.	
Onground works	\$1,330
Goulburn Murray Landcare Network Inc.	
Environmental Water Management	\$3,636
SIR Irrigation Frameworks (LWMP)	\$2,000
Greater Shepparton City Council	
RiverConnect Project	\$100,000
Longwood Plains Conservation Management Network Inc	
Taking Care of Country	\$5,000
South West Goulburn Landcare Inc	
Taking Care of Country	\$2,500
Strath Creek Landcare Group	
Onground works	\$14,466
Upper Goulburn Landcare Network	
Taking Care of Country	\$10,000
Yorta Yorta Nation Aboriginal Corporation	
Onground works	\$41,869
Victorian Government - Other 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.	
Australian Platypus Conservancy	
Community monitoring of Platypus in Lower Goulburn River	\$5,490
Euroa Arboretum Inc.	
Managing threats in the Longwood Plains	\$10,200
Taungurung Land and Waters Council	
Horseshoe Lagoon EWater Delivery 20-21	\$1,123
Yorta Yorta Nation Aboriginal Corporation	
The Living Murray 2020/21	\$6,201
Grand Total	\$1,182,094

Appendix 8: RCS sub strategies progress

Plan or strategy - overview of purpose	Timeframe	Status and further details
Community and Environment sub-strategies		
<p><i>Biodiversity Strategy for the Goulburn Broken Catchment</i> 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, state and national government policies and strategies.</p> <p>The strategy identifies initiatives under five-year strategic directions for achieving a 15-year vision.</p>	2016-2021	<p>Partially renewed through the RCS process at the higher level.</p> <p>Complete renewal in early 2022.</p> <p>See Biodiversity page 52.</p>
<p><i>Land Health Strategy</i> 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	See Land page 59.
<p><i>Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy</i> 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 59.</p>
<p><i>Shepparton Irrigation Region (Agricultural Floodplains) Land and Water Management Plan</i> 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>Implementation phase, awaiting funding for renewal.</p> <p>See Sustainable irrigation page 68.</p>
<p><i>Goulburn Broken Waterway Strategy</i> 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>Undergo a final review in 2021.</p> <p>Renewed in 2022</p> <p>See Waterways page 34.</p>
<p><i>Goulburn Broken Regional Floodplain Management Strategy</i> The new 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>See Floodplain page 47.</p>
<p><i>Climate Change Adaptation Planning for Natural Resource Management in the Goulburn Broken Catchment</i> Funded through the Australian Government, the Climate Change Planning sub-strategy better integrates climate change adaptation and support the implementation of the Goulburn Broken Regional Catchment Strategy 2013-2019 (RCS).</p>		<p>Not to be renewed, however information to be incorporated into RCS and sub-strategies.</p> <p>See Climate change page 26.</p>
Integrated Local Plans		
<p>SES Local Plans (Agricultural Floodplains, Commuting Hills, Upland Slopes, Southern Forests and Productive Plains)</p> <p>Local 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 (http://weconnect.gbcma.vic.gov.au).</p>	2021-2027 (in-line with the RCS)	To be completed in September 2021.

Plan or strategy - overview of purpose	Timeframe	Status and further details
Organisation's business sub-strategies		
<p>Corporate plan 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"> • an unbroken line of sight between the regional vision for the plan period and output delivery; • clearly articulating the plan with a compelling and simple narrative; and • transparent performance measures. <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 2021-2025-26 has been developed and designed in such a way that it is more accessible to a broader audience.</p> <p>See progress report page 21.</p>
<p>Community NRM Action Plan 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	<p>Implementation phase</p> <p>See Community page 28.</p>
<p>Communication and Marketing Strategy Communication and Marketing Strategy aims to have coordinated, innovative marketing and communication effectively informing stakeholders on how the Goulburn Broken CMA will achieve and deliver its vision.</p>	2018-2020	<p>To be renewed by December 2021, after the completion of the RCS.</p> <p>See Community page 28.</p>
<p>Community Engagement Strategy and Action Plan The Community Engagement Strategy and Action Plan are designed to be flexible, dynamic and responsive documents that reflect the constantly evolving environment the Goulburn Broken CMA and its stakeholders operate in.</p>	2018-2020	<p>To be renewed by December 2021, after the completion of the RCS.</p> <p>See Community page 28.</p>
<p>Ready for Change – Evaluation Strategy for the Goulburn Broken Catchment. The aim of evaluation process for the Catchment's people to continue to be quick in adapting to change circumstances while retaining a strong sense of the RCSs long-term vision.</p> <p>The purpose of the ready for change strategy is to support evaluation processes that make the RCS response to unforeseen and shifting circumstances.</p>	2017-2022	<p>To be renewed by December 2021, after the completion of the RCS.</p>
<p>Goulburn Broken CMA Climate Change Integration Strategy 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	<p>Review completed in 2015. The renewal of the strategy would be beneficial after the completion of the RCS.</p> <p>See Climate change page 26.</p>
<p>Goulburn Broken Information and Communication Technology Strategy Internal strategy to guide development and delivery of information and communication technology services. Development of the Information and Communication Technology Strategy was postponed due to unexpected staff resource losses and budget uncertainty. Focus of available resources was to maintain existing capability and continue to meet defined service levels agreements.</p>	2015-2017	<p>The renewed strategy will be in place for the new fiscal year 2021-22 (5-year strategy)</p> <p>See Governance page 88.</p>
<p>Workforce Strategy and Action Plan (including capability) 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>	2013-2018	<p>To be renewed 30 June 2022.</p> <p>See Human resources page 80.</p>
<p>Goulburn Broken CMA Diversity & Inclusion Plan (not legislated but directed by the Minister for Water) 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	<p>Implementation phase.</p> <p>See Human resources page 80.</p>

Plan or strategy - overview of purpose	Timeframe	Status and further details
<p>Goulburn Broken Indigenous Participation Plan</p> <p>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	Updated annually. See Community page 28.
<p>Reconciliation Action Plan</p> <p>The RAP acknowledges our intent and desire as an organisation to express 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>	2019-2021	Draft by June 2021, then approved for 2021-2023 period (two-year cycles) See Community page 28.

Investment patterns and maturity (stages) of implementation ⁱ

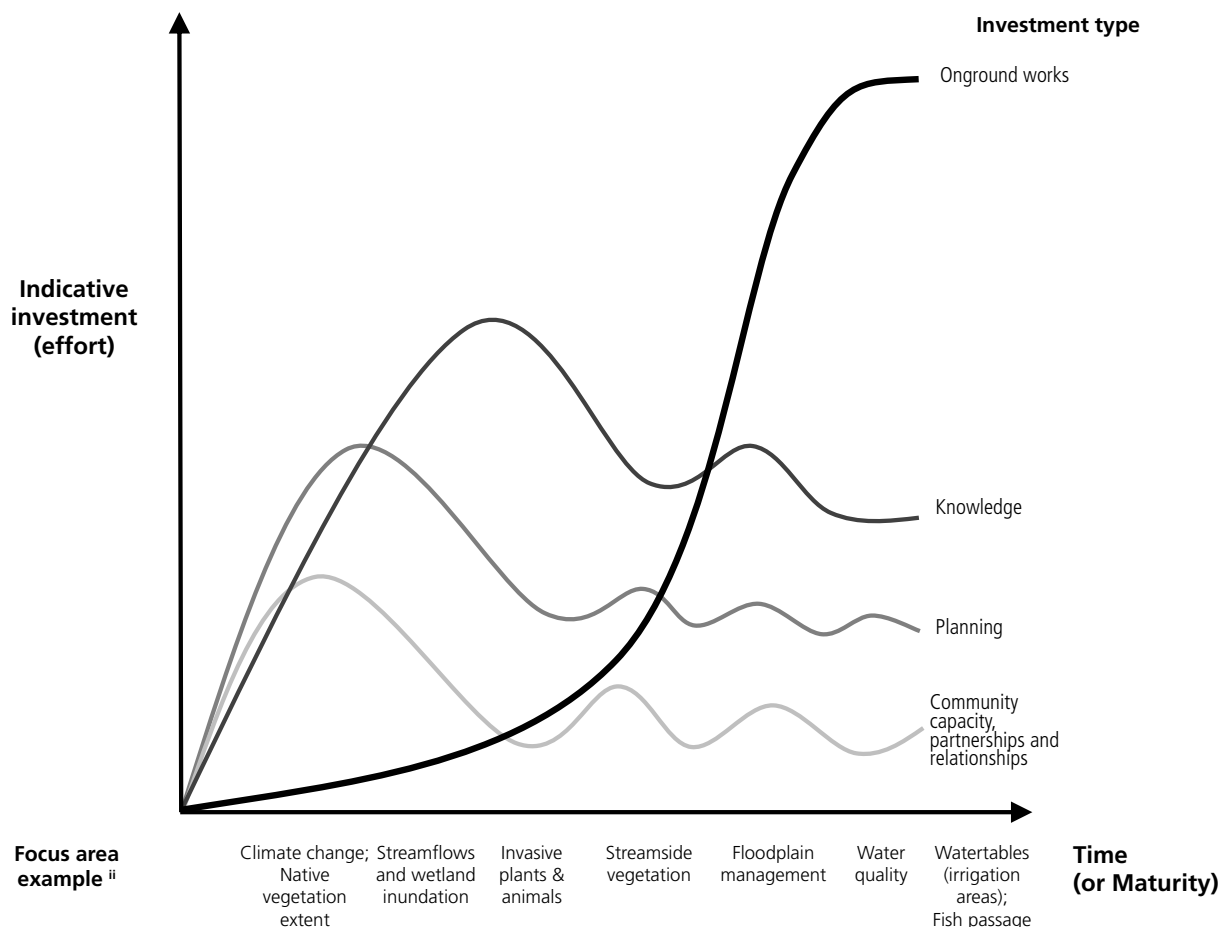
The stylised investment patterns in the graph show the Goulburn Broken CMA is at different stages of maturity of implementing approaches in various focus areas.

For example, more has been done in watertable management (in irrigation areas) than in most other focus areas: it began much earlier, is much better understood, and has had more works completed, so is considered more mature than floodplain management, which in turn is more mature than efforts in responding to climate change.

The time-scale is different for each focus area. For example, investment in native vegetation extent is not likely to result in an exponential uptake of works in the same timeframe as fish passage works.

Currently, government investment dictates the levels of effort in each investment type (onground works; knowledge; planning; and community capacity, partnerships and relationships), although the Goulburn Broken CMA attempts to ensure the balance of investment between the different types is appropriate for the focus area, and efforts are made to broaden investment to further satisfy strategy and community needs.

Relative investment (effort) in each investment type and maturity of investment ⁱ



i. Adapted from the Goulburn Broken CMA's From the fringe to mainstream – A strategic plan for integrating native biodiversity 2004-07.
ii. Focus areas shown are examples of various Goulburn Broken CMA and partner endeavours; it is not a complete list.

Appendix 9: 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 221 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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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, page 142.

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 is 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, page 142.

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 the 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 pages 20 and 142.

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, page 142.

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 DELWP 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, page 142.

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	LWMP	Land and Water Management Plan
AgVic	Agriculture Victoria	MDB	Murray-Darling Basin
ARI	Arthur Rylah Institute	MDBA	Murray-Darling Basin Authority
BBCMN	Broken Boosey Conservation Management Network	MFEP	Municipal Flood Emergency Plan
BRP	Biodiversity Response Planning is a area-based planning approach to biodiversity conservation in Victoria.	ML	Megalitre
BOA	Biodiversity On-Ground action - onground initiatives and funding through the Victorian Government	MLA	Member of the Legislative Assembly
BOM	Bureau of Meteorology	MLC	Member of the Legislative Council
BSMS	Basin Salinity Management Strategy (MDBA)	MP	Member of Parliament
CaLP	<i>Catchment and Land Protection Act 1994</i>	MoU	Memorandum of Understanding
CEO	Chief Executive Officer	NCCMA	North Central CMA
CEWH	Commonwealth Environmental Water Holder	NECMA	North East CMA
CFA	Country Fire Authority (Victoria)	NLP	Australian Government's National Landcare Program
CMA	Catchment Management Authority	no.	Number
CMN	Conservation Management Network	NRM	Natural Resource Management
CSIRO	Commonwealth Scientific and Industrial Research Organisation	NRIP	Natural Resources Investment Program
DELWP	Department of Environment, Land, Water and Planning	OCOC	Our Catchments Our Communities - Integrated Catchment Management in Victoria 2016-19
DJPR	Department of Jobs, Precincts and Regions.	OHS	Occupational Health and Safety
DTF	Department of Treasury and Finance	PEER	Public Entity Executive Remuneration Policy
DWG	Designated Work Group	PV	Parks Victoria
EBA	Enterprise Agreement	RAP	Registered Aboriginal Party recognised under the <i>Victorian Aboriginal Heritage Act 2006</i>
EC	Electrical Conductivity unit	RAP	Reconciliation Action Plan
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	RaPP Map	Rangeland and Pasture Productivity Map (Goulburn Broken) Regional Catchment Strategy
EVC	Ecological Vegetation Class	RCS	
EWAG	Environmental Water Advisory Group	RLP	Australian Government's Regional Land Partnerships
FOI	Freedom of Information	ROBSOG	Ribbons of Blue and Sashes of Green (Biodiversity project)
FTE	Full-time Equivalent	RSMP	Regional Salinity Management Plan
FWP	Farm Water Program	RTW	Return to Work
GB CMA	Goulburn Broken Catchment Management Authority	SES	Social-Ecological System
GHG	Greenhouse Gas	SIR	Shepparton Irrigation Region
GL	Gigalitre	SIRCIS	Shepparton Irrigation Region Catchment Implementation Strategy
GMID	Goulburn-Murray Irrigation District	SIRLWMP	Shepparton Irrigation Region Land and Water Management Plan
GMLN	Goulburn Murray Landcare Network	SIRPPIC	Shepparton Irrigation Region People and Planning Integration Committee
GMW	Goulburn-Murray Water	SoO	Statement of Obligations
GST	Goods and Services Tax	t CO2e	Tonnes of carbon dioxide (CO2) emitted
ha	Hectare	TCV	Treasury Corporation of Victoria
HSR	Health and Safety Representative	TfN	Trust for Nature
IRP	Issue Resolution Procedures	TFWS	Total Flood Warning System
IT / ICT	Information Technology / Information and Communications Technology	TLaWC	Taungurung Land and Waters Council
IVT	Inter-Valley Trade transfers	VCAT	Victorian Civil Administrative Tribunal
km	Kilometre	VEPP	Victorian Environmental Partnerships Program
KPI	Key Performance Indicator	VEWH	Victorian Environmental Water Holder
L	Litre	VFMP	Victorian Farm Modernisation Program
LaBIF	Land and Biodiversity Implementation Forum	VIPP	Victorian Industry Participation Policy
LiDAR	Light Detection and Ranging remote sensing technology	WGCMN	Whroo Goldfields Conservation Management Network
LIDP	Local Industry Development Plans	YYNAC	Yorta Yorta Nation Aboriginal Corporation
LGA	Local Government Authority		

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Staff list 2020-21

Aaron Findlay	Collin Tate	Janice Mentiplay-Smith	Kirsten Roszak	Samantha Moreno
Andrea Muskee	Corey Wilson	Jenny Wilson	Mark Turner	Shannon Crawford
Annette Neessen	Daniel Lovell	Jim Begley	Mary Dimit	Simon Casanelia
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Brett McFarlane	Dylan McWhinney	Joel Leister	Megan McFarlane	Sue Kosch
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Chris Cumming	Gaye Sutherland	Kate Montgomery	Rebecca Caldwell	Vicki Mackenzie
Chris Nicholson	Guy Tierney	Keith Ward	Rhiannon Sandford	Zuzanna Lelito
Christine Glassford	James Burkitt	Kerstie Lee	Russel Haque	

RECOGNISING MAJOR NRM CONTRIBUTIONS

SHIRLEY SAYWELL



Shirley Saywell is the first to admit she is a polarising figure in her local community of Euroa and the Strathbogies. And it's exactly how she likes it.

"I don't care if people like me. I couldn't care less."

But it's clear from the loyal band of supporters who roll up their sleeves every time Saywell throws her weight behind a movement, that there's plenty who do indeed like her a lot.

"I am who I am. And I like working with people who think outside the box and are not content with mediocre," she said.

Saywell counts among her proudest achievements the Save the Strathbogie Forest campaign to protect the forest from logging and the successful VCAT battle to block the introduction of gaming machines to Euroa.

"We didn't think we had a hope in hell of winning at VCAT but it was such an important victory because our community was forced to really think about what it wanted for its future."

She has been president of the Euroa Arboretum "forever" and is the current president of the Euroa Environmental Group.

The Euroa Arboretum is a critical resource for the Goulburn Broken Catchment. It is home to the region's indigenous seedbank and is at the forefront of propagation techniques for local native species and grassland restoration trials.

The Euroa Arboretum also supports the development of young conservationists in the Goulburn Broken through a bush kinder program.

Saywell was instrumental in the 'Save the Grey Crowned Babbler' project, is a rusted-on 'Friend of the Sevens' and the co-ordinator of the Euroa Treescape Planting Project.

"They are all examples of how positive change can happen when good people speak up."

She was also a driving force behind the formation of the influential Strathbogie Voices group (now Strathbogie Inc), a group formed to highlight the threats to and opportunities of sustainability.

Saywell arrived in Australia from her native New Zealand as a wide-eyed 19-year-old straight from the family's dairy farm in the south of the North Island.

"I was born smack-bang in the middle of nine kids and I couldn't wait to get out of there," she laughed.

"Australia in the late 1970s was the land of milk and honey and it represented the freedom I was craving."

It was from her unyielding yet kind parents she thinks she inherited her sense of civic duty and responsibility to her community.

"Our farm was only 60 acres and in New Zealand you can milk 100 cows on that size land parcel.

"We never had money to spare but every year Dad gave the neighbours a leg of lamb or a goose or duck for Christmas."

She also credits her father with teaching her the value of conservation and sustainability.

"Of his 60 acres, he always had 10 acres devoted to native bush. New Zealand native trees are very slow growing so to have a bit of remnant bush was very special. He could have run another 20 cows or so had he cleared it.

"Dad loved trees and taught us the value of the bush."

She wasn't in Australia long before she met her future husband Mark Brady, a young school teacher in Melbourne's outer east. The pair bought into a trucking business in Euroa, using the settlement money from a car accident which almost claimed her life.

Mark, who battled Multiple Sclerosis for many years, was later diagnosed with an aggressive form of cancer.

"Mercifully he died quickly and it broke my heart but we had more than 20 years together and I felt well loved."

When he asked her to run the business after his death, he left her with some sage advice.

"He said 'Shirl, you wear your heart on your sleeve. Be careful when I'm not around.'"

She got her truck licence and spent the next seven years growing Brady and Kibble into a transport company that now employs 17 local people and runs 10 trucks.

Then at age 47 and ready for a new adventure, Saywell bought a backpack and a one-way ticket to Asia.

"Of course, I was too old to backpack around Asia but it was wonderful and on the last night of my trip, I met Andy."

Andy moved from Switzerland in 2007 to be with Saywell.

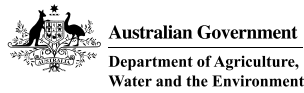
And while Andy teasingly accuses her of having a Mother Teresa complex, he is by her side for all her community activities.

She's the founder of the Strathbogie Local Online Food Hub – an avenue for local producers to sell their goods.

"This is what I do but it's not my passion," as she points to a giant truck rolling to a stop in the yard.

She turns and starts delegating to a committed handful of volunteers about the locally baked sourdough bread and organic lamb.

"This is my passion."



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.

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